## RESOLUTION AUTHORIZING CONTRACT MODIFICATION #03 FOR THE PURAC PHASE III PROJECT

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MOTIONED BY: Gardiner SECONDED BY: Friedrich

**WHEREAS,** the North Hudson Sewerage Authority (hereinafter "Authority") is a public body, duly formed under the Sewerage Authorities law, constituting Chapter 138 of the Laws of New Jersey of 1946, as amended (Chapter 14A of Title 40 of the New Jersey Statutes Annotated) and possesses the powers set forth therein; and

WHEREAS, pursuant to the approval granted by virtue of R.18-061, the Authority has contracted with Rapid Pump & Meter Service Co., N.J. in the amount of \$11,862,950.00 for the Purac Phase III Project; and

WHEREAS, two previous contract modifications totaling \$31,191.05 were approved increasing the total contract price to \$11,894,414.05; and

WHEREAS, this contract modification has been requested in order to efficiently advance the project as described in the report identified as "Exhibit A", with the additional work being documented as required by JACOBS, the project engineer at no additional cost to the Authority; and

**WHEREAS**, the Facilities Review Board has reviewed the proposal and recommends the approval of the requested contract modification.

**NOW, THEREFORE, BE IT RESOLVED** that the Authority hereby authorizes the execution and implementation of said contract modification # 03 with no increase in contract..

**DATED: APRIL 15, 2021** 

#### **RECORD OF COMMISSIONERS' VOTE**

#### RECORD OF COMMISSIONERS' VOTE

	YES	NO	<b>ABSENT</b>
Commissioner Soares	X		
Commissioner Kappock	X		
Commissioner Marotta			X
Commissioner Gardiner	X		
Commissioner Friedrich	X		
Commissioner Guzman	X		
Commissioner Velazquez			X
Commissioner Barrera	X		
Commissioner White	X		

THIS IS TO CERTIFY THAT THIS RESOLUTION WAS DULY ADOPTED BY THE NORTH HUDSON BOARD OF COMMISSIONERS ON APRIL 15, 2021.





Water Business Group Jacobs New Jersey Office 412 Mt Kemble Avenue

Morristown, NJ 07962 **O**+1 973 267 0555

April 1, 2021

William P. Machotka, P.E.
Section Chief
State of New Jersey Department of Environmental Protection
Municipal Finance and Construction Element
P.O. Box 425
Trenton, NJ 08625-0425

Subject: North Hudson Sewerage Authority

Project No. S340952-30

PURAC System Improvements Phase 3 - Physical System Improvements

Contract Modification No. P-03

#### Dear Mr. Machotka:

We have found it necessary to issue the following Contract Modification to the PURAC System Improvements Phase 3 – Physical System Improvements Project:

#### No. P-03:

- Labor to Remove and Reinstall New 6" DeZurik Butterfly Valves
- Additional Labor and time due to unforeseen Site Conditions During Media Removal (55 Additional Calendar Days)
- (Credit) Unit Price Item U1 Provision for Steel Welded Pipe ALLOWANCE
- (Credit) Unit Price Item U2 Fuel Pricing Adjustment
- (Credit) Unit Price Item U4 Structural Crack Repair
- (Credit) Unit Price Item U6 Overhead Concrete Repair
- (Credit) Unit Price Item U7 Horizontal Concrete Repair
- (Credit) Unit Price Item U8 Steel Pipe Corrosion Inspection ALLOWANCE
- Contract Time Adjustment for COVID related Media Supplier Change (15 Additional Calendar Days)
- Contract Time Adjustment for Structural Repairs in Cells (40 Additional Calendar Days)
- Contract Time Adjustment Modification Skimmer Flight Modifications (10 Additional Calendar Days)
- Contract Time Adjustment Modification Filter Cell Level Transmitters (5 Additional Calendar Days)

#### Total Amount of the Modification No. P-03: \$0

Attached are two (2) copies of the completed NJDEP "Contract Modification Proposal and Acceptance Form", for the above-mentioned Contract Modification. The copies have been signed by the North Hudson Sewerage Authority (the Owner), Rapid Pump and Meter Service Co., Inc. (the Contractor) and signed and sealed by Jacobs (the Engineer). We would appreciate your review and approval of this modification.

Should you have any questions or require additional information, please call me at 862.242.7067

Sincerely,

CH2M HILL

Shivani Patel, P.E. Project Manager

Shivani Patel

Cc: Fredric J. Pocci, P.E., NHSA

Steven Marsich, PE, Rapid Pump Steve Kulcsar, PE, Rapid Pump

Dejan Davidovic, Jacobs Michael Curley, NJDEP

NJO File

1.	ISSUING OFFICE	2. PROJECT NO.	3. CONTRACT NO.	4. MODIFICATION NO.				
No	rth Hudson Sewerage Authority	S340952-30	PURAC System Upgrades Phase 3-Services During  Mod # P-03					
			Construction					
5.	TO (CONTRACTOR)		6. PROJECT LOCATION A	AND DESCRIPTION				
	285 Strai PO Bo	eter Service Co. Inc ght Street ox AY NJ 07509		reet WWTP New Jersey				
7.								
	4/1/2021 Shivani Patel, P.E./Project Manager							
	4/1/2021	Shivani Patel	, P.E./Project Manager					
	Date	<u></u>	Name and Title	Signature				
8.	Date  DESCRIPTION OF CH.	Type  ANGE: Pursuant to the clause						

As a resu	alt of the above, the contract price	e and times	are revised as follows:								
ITEM NO.	ITEM DESCRIPTION				TOTAL COST						
1	Labor to Remove and Rei	nstall New	6" DeZurik Butterfly Va	lves **	\$49,405.39						
2	Additional Labor and Time Removal (55 Additional Cal			ng Media	\$103,309.55						
3	(Credit) Unit Price Item U1	Provision f	or Welded Steel Pipe ALLO	OWANCE	(\$57,852.84)						
4	(Credit) Unit Price Item U2	Fuel Pricin	g Adjustment		(\$5,000.00)						
5	(Credit) Unit Price Item U4	(\$38,148.00)									
6	(Credit) Unit Price Item U6	(Credit) Unit Price Item U6 Overhead Concrete Repair (\$10,357.50)									
7	(Credit) Unit Price Item U7	Horizontal	Concrete Repair		(\$25,200.00)						
8	(Credit) Unit Price Item U8	Steel Pipe	Corrosion Inspection ALLC	OWANCE	(\$16,157.10)						
9											
10	Contract Time Adjustment f (40 Additional Calendar Da		Paid via Unit Price Items U3-U7								
11	Contract Time Adjustment M (10 Additional Calendar Da	Cost approved under MOD P-02									
12	Contract Time Adjustment N (5 Additional Calendar Day		ı Filter Cell Level Transmit	ters	Cost approved under MOD P-02						
TOTAL	COST THIS MODIFICATION_	\$0									
The cont modifica	ract time is hereby: $increased \ge tion$	decreas	ed or remaining the sa	$\underline{me} \square$ as a res	ult of this						
** - Con	tract times for this item to be visi	ted at a late	r time								
The fore	going modification is hereby acco	epted:									
Rapid	Pump & Meter Service Co, Inc.	North Hu	dson Sewerage Authority		Jacobs						
(	CONTRACTOR		OWNER	(NJPE SEAL)	) ENGINEER						
BY: _	I	3Y:		BY:							
DATE:	I	DATE: _		DATE:							
APPRO	VAL:										
	STATE OF NEW	V JERSEY		DAT	E						

9. ISSUING OFFICE	10. PROJECT NO.	11. CONTRACT NO.	12. MODIFICATION NO.
North Hudson Sewerage Authority	S340952-30	PURAC System Upgrades Phase 3 Services During Construction	Mod # P-03
13. CONTRACTOR'S PR	OPOSAL – CHANGE IN O	CONTRACT PRICE	
	attach additional sheets as ne		
(Proposed)			
See Attachment B			
By executing this Change	Order No. P-03 for the PUR	AC System Upgrades Pha	use 3 Services During Construction
Project the Contractor ack	nowledges that its terms pro	vide full and final settlem	ent of any and all claims against
			Owner from and waives all claims, g to the changed work including,
			costs, home and field office overhead
	f contract, cardinal change		,
NET INCREASE	NET DECREA	ASE	CALENDER DAYS INCREASE
\$ 0	\$ <u>0</u>		125 DAYS
DATE:	TYPE NAME AND TITI		SIGNATURE:

14. ISSUING OFFICE & PI	ROJECT NO.	15. CONTRACT NO.	16. MODIFICAT	TION NO.
North Hudson Sewerage Authority, S340952-04		PURAC System Upgrades Phase 3 Services During Construction		# P-03
17. ORIGINAL CONTRAC	CT BID PRICE		\$ 11,862,950.00	
	S CHANGE ORDERS			-
	COST INCLUDING CHA		\$ 11,894,141.05	-
See Attachment C		AMOR		
19. OTHER IMPACTS RES	SULTANT OF THIS CHA	ANGE:		
An increase in contract t	ime is anticipated and has	been detailed Attachmen	nt A	
20. RESUME OF NEGOTI	ATIONS OR RECOMME	ENDATIONS (Loanee's	Representative):	
	TYPE NAME AND TITL REPRESENTATIVE:	LE OF LOANEE'S	SIGNATURE:	

#### Attachment A

#### **DESCRIPTION OF CHANGE**

**Issuing Office:** North Hudson Sewerage Authority

Project Number: \$340952-30

**Modification No:** P-03

Box No. 8: DESCRIPTION OF CHANGE

- 1. Labor to Remove and Reinstall New 6" DeZurik Butterfly Valves
  - a. The PURAC system contains 10 filter cells in total which among other appurtenances, contains 2 6-inch butterfly valves in each of the 10 filter cells and 3 6-inch butterfly valves for the air saturation tanks for a total of 23 6-inch butterfly valves. The 6-inch butterfly valves located on the filter recycle system must open/close during a backwash cycle. The specified valves were selected as they are AIS compliant, however after installation the valves have become corroded and are failing to properly open/close when required. From the Engle Metallurgical analysis performed by the manufacturer it was apparent that the media in the fluid attacks the carbon steel BHP valve body, causing rust (iron oxide) buildup. In consultation with the manufacturer they feel that the BOS-US butterfly valve would be a better fit for the environment of the PURAC System as the body of the BOS-US valve is ductile iron and is fully lined with nitrile rubber (NBR). The manufacturer will replace these valves at no cost to the Owner, however, there are labor costs associated to this for the Contractor. The change in contract time will be visited at a later time.
- 2. Additional Labor and Time due to Unforeseen Site Conditions during Media Removal (55 additional calendar days)
  - a. The existing media in the 10 filter cells should have been located above the filter tiles, however during demolition about 1 foot of media was located under the tiles. This unforeseen site condition required additional time and labor (4 working days per cell for an equivalent of 55 calendar days) for the Contractor to be able to remove the tiles and media below them.
- 3. (Credit) Unit Price Item U1 Provision for Welded Steel Pipe ALLOWANCE
  - a. Credit of Allowance Item for Welded Steel Pipe and Appurts
- 4. (Credit) Unit Price Item U2 Fuel Pricing Adjustment
  - a. Credit of Unit Price Item for Fuel Pricing Adjustment
- 5. (Credit) Unit Price Item U4 Structural Crack Repair
  - a. Credit of Unit Price Item for Vertical Concrete Repair
- 6. (Credit) Unit Price Item U6 Overhead Concrete Repair
  - a. Credit of Unit Price Item for Horizontal Concrete Repair

- 7. (Credit) Unit Price Item U7 Horizontal Concrete Repair
  - a. Credit of Unit Price Item for Steel Pipe Inspection
- 8. (Credit) Unit Price Item U8 Steel Pipe Corrosion Inspection ALLOWANCE
  - a. Credit of Allowance Item for Steel Pipe Corrosion Inspection
- 9. Contract Time Adjustment for COVID related Media Supplier Change
  - a. Initial Media Installer for Filter Cells 9 and 10 was supposed to start media installation of media on 3/23/20. However, due to COVID travel restrictions, this subcontractor was unable to install media per the schedule. The Contractor was able to find a local sub to fulfil this this work which began on 4/6/20. Therefore an addition of 15 calendar days has been added for the change in media supplier for Filter Cells 9 and 10.
- 10. Contract Time Adjustment for Structural Repair in Cells
  - a. Structural repairs were required for each of the cells that were not fully understood until the interior of the cells were demolished. Contractor required 3 working days for each filter cell for a total of 30 working days which equates to about 40 calendar days.
- 11. Contract Time Adjustment for Skimmer Flight Modifications
  - a. Addition of 10 calendar days due to skimmer flight modifications as a result of supplier produced material requiring field adjustment.
- 12. Contract Time Adjustment for Filter Cell Level Transmitters
  - a. Addition of 5 calendar days due to troubleshooting required for the existing filter cell level transmitter that were approved to be replaced under MOD P-02.

#### **Attachment B**

#### CONTRACTOR'S PROPOSAL – CHANGE IN CONTRACT PRICE

**Issuing Office:** North Hudson Sewerage Authority

Project Number: \$340952-30

**Modification No:** P-03

#### Box No. 13: CONTRACTOR'S PROPOSAL - CHANGE IN CONTRACT PRICE

- 1. Labor to Remove and Reinstall New 6" DeZurik Butterfly Valves
  - a. Cost Proposal (PCO) received from Rapid Pump via email on March 12, 2021.
- 2. Additional Labor and Time due to Unforeseen Site Conditions during Media Removal (55 additional calendar days)
  - a. Cost Proposal (PCO) received from Rapid pump via email on March 12, 2021.
- 3. (Credit) Unit Price Item U1 Provision for Welded Steel Pipe ALLOWANCE
  - a. Reduction in Cost in Unit Price Item U1 as it will no longer be needed.
- 4. **(Credit)** Unit Price Item U2 Fuel Pricing Adjustment
  - a. Reduction in Cost in Unit Price Item U2 as it will no longer be needed.
- 5. (Credit) Unit Price Item U4 Structural Crack Repair
  - a. Reduction in Cost in Unit Price Item U4 as it will no longer be needed.
- 6. (Credit) Unit Price Item U6 Overhead Concrete Repair
  - a. Reduction in Cost in Unit Price Item U6 as it will no longer be needed.
- 7. (Credit) Unit Price Item U7 Horizontal Concrete Repair
  - a. Reduction in Cost in Unit Price Item U7 as it will no longer be needed.
- 8. (Credit) Unit Price Item U8 Steel Pipe Corrosion Inspection ALLOWANCE
  - a. Reduction in Cost in Unit Price Item U8 as it will no longer be needed.
- 9. Contract Time Adjustment for COVID related Media Supplier Change
  - a. Addition of 15 calendar days due to change in media supplier. Contract cost change approved under MOD P-01.
- 10. Contract Time Adjustment for Structural Repair in Cells
  - a. Addition of 40 calendar days due to unforeseen structural cell repairs. Additional work effort paid under Unit Price Items U3 through U7.

- 11. Contract Time Adjustment for Skimmer Flight Modifications
  - a. Addition of 10 calendar days due to skimmer flight modifications as a result of supplier produced material requiring field adjustment. Contract cost change approved under MOD P-02.
- 12. Contract Time Adjustment for Filter Cell Level Transmitters
  - a. Addition of 5 calendar days due to troubleshooting required for the existing filter cell level transmitters that were approved to be replaced under MOD P-02.

### NHSA PURAC System PCO Cost Breakdown FOR DISCUSSION PURPOSES ONLY

Des	cription: PCO for Labor to remove and reinstall 6" De	ezurik Recycle Valves from (	10) Filter Ce	<u>ills</u>	
1.	Payroll Costs:		<u>Hours</u>	<u>Rate</u>	<u>Total</u>
	See page 2 of Proposal		<u>Ilouis</u>	\$ \$ \$ \$	35,826.84 - - -
				SUBTOTAL: \$	35,826.84
2.	Material & Permanent Equipment: N/A			\$	-
				SUBTOTAL: \$	-
3.	Subcontractor Work:	Price	Qty.		
				\$ \$	- -
				SUBTOTAL: \$	<u> </u>
4.	Supplement Costs: Painting Equipment Welding Supplies			\$ \$ \$	- - -
	Freight Charges One Way Common Carrier from Paterson, N (Based on shipping (5/6) valves at a time to		8	\$ \$ \$ \$	4,680.00 - - - -
	Bonds & Insurance Adjustment:			\$ \$ SUBTOTAL: \$	4,680.00
5.	Grand Total (Subtotal 1, Subtotal 2, Subtotal 4, Subtotal 5	5):		\$	40,506.84
	Contract Decrease				
6.	Contractor Credit			\$	-
	Net Contract Increase				
7	Direct Work Sub-Total (Increase 5 + Decrease 6)			\$	40,506.84
8	Contractor's Overhead (10%): Contractor's Profit (10%):			\$ \$	4,050.68 4,455.75
9	Subcontractor Total (Item 3 Subtotal)			\$	-
10	Subcontractor Markup (5% of Item 10 total)			\$	-
11	Bond Premium (0.8% x Lines 8,9):			\$	392.11
12	TOTAL INCREASE:			\$	49,405.39

# LABOR BREAKDOWN FOR DISCUSSION PURPOSES ONLY

#### Labor

Remove Initial (6) Valves		Men	Days	Hes/Day	Total House	Rate	<u>Amount</u>		Total
Remove Initial (6) Valves	PCO for Labor to remove and reinstell					<u>Nate</u> Colle	Allount		<u>TOLAI</u>
1	PCO for Labor to remove and remstan	0 Dez	ulik Necyt	NG AUIAGS I	TOIII (TO) FILLER	<u>Cells</u>			
1	Pomovo Initial (6) Valves	4	2	Ω	16	Laborer	\$ 70.16	æ	1 122 56
Crate (6) Valves & Prep for Delivery 1 1 8 8 8 Laborer \$ 70.16 \$ 561.28  Receive & Reinstall Modified (6) Valves 1 2 10 20 Millwright \$ 89.29 \$ 1,785.90  Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21  Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,423.59  Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,122.56  Remove Next (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Crate (6) Valves & Prep for Delivery 1 1 8 8 Laborer \$ 70.16 \$ 561.28  Receive & Reinstall Modified (6) Valves 1 2 10 20 Laborer \$ 70.16 \$ 1,403.21  Test Valve Operation 1 2 10 20 Laborer \$ 70.16 \$ 1,403.21  Remove Next (6) Valves 1 2 10 20 Laborer \$ 70.16 \$ 1,403.21  Remove Next (6) Valves 1 2 10 20 Electrician \$ 73.75 \$ 1,475.02  Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21  Receive & Reinstall Modified (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Crate (6) Valves & Prep for Delivery 1 8 8 8 Laborer \$ 70.16 \$ 1,403.21  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Remove Final (5) Valves 1 2 10 20 Laborer \$ 70.16 \$ 561.28  Receive & Reinstall Modified (6) Valves 1 2 10 20 Electrician \$ 73.75 \$ 1,475.02  Remove Final (5) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Remove Final (5) Valves 4 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Remove Final (5) Valves 4 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02	Remove miliai (o) valves						•	•	
Crate (6) Valves & Prep for Delivery						_	•	•	
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Test Valve Operation 1 2 10 20 Millwright \$ 89.29 \$ 1,785,90	Receive & Reinstall Modified (6) Valves	1	2	10	20	Laborer	\$ 70.16	\$	1,403.21
Remove Next (6) Valves	, ,	1		10	20	Millwright	\$ 89.29	\$	1,785.90
1 2 8 16 Millwright \$ 89.29 \$ 1,428.72 Crate (6) Valves & Prep for Delivery 1 1 8 8 Laborer \$ 70.16 \$ 561.28 Receive & Reinstall Modified (6) Valves 1 2 10 20 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 10 20 Electrician \$ 73.75 \$ 1,180.02  Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,475.02  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Crate (6) Valves & Prep for Delivery 1 1 8 8 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 10 20 Laborer \$ 70.16 \$ 1,122.56  Receive & Reinstall Modified (6) Valves 1 2 8 16 Electrician \$ 73.75 \$ 1,180.02  Crate (6) Valves & Prep for Delivery 1 1 8 8 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 10 20 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 10 20 Electrician \$ 73.75 \$ 1,475.02  Remove Final (5) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 8 16 Laborer \$ 70.16 \$ 1,403.21 Test Valve Operation 1 2 8 16 Electrician \$ 73.75 \$ 1,475.02  Crate (5) Valves & Prep for Delivery 1 1 8 8 Laborer \$ 70.16 \$ 1,428.72 Test Valve Operation 1 2 10 20 Laborer \$ 70.16 \$ 1,428.72 Laborer \$ 70.16 \$ 561.28  Receive & Reinstall Modified (5) Valves 1 2 10 20 Laborer \$ 70.16 \$ 561.28				10			\$ 73.75	\$	1,475.02
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Test Valve Operation 1 2 10 20 Millwright \$ 89.29 \$ 1,785.90 1 2 10 20 Electrician \$ 73.75 \$ 1,475.02	Crate (6) Valves & Prep for Delivery	1	1	8	8	Laborer	\$ 70.16	\$	561.28
Test Valve Operation 1 2 10 20 Millwright \$ 89.29 \$ 1,785.90 1 2 10 20 Electrician \$ 73.75 \$ 1,475.02	Receive & Reinstall Modified (6) Valves	1	2	10	20	Laborer	\$ 70.16	\$	1,403.21
Remove Next (6) Valves 1 2 8 16 Laborer \$ 70.16 \$ 1,122.56 1 2 8 16 Millwright \$ 89.29 \$ 1,428.72 1 2 8 16 Electrician \$ 73.75 \$ 1,180.02									
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Test Valve Operation 1 2 10 20 Millwright \$ 89.29 \$ 1,785.90	Crate (5) Valves & Prep for Delivery	1	1	8	8	Laborer	\$ 70.16	\$	561.28
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		-							•
	lest valve Operation	1	2	10	20	Electrician	\$ 73.75	\$	1,475.02

NOTE: All cell commissioning/decommissioning, cell startup services and/or other activities required to operate Filter Cells shall be performed by NHSA Operations Staff.

TOTAL LABOR \$ 35,826.84

# NHSA PURAC System PCO #1 Cost Breakdown FOR DISCUSSION PURPOSES ONLY

Des	cription:	PCO#1 Labor Inefficiencies due to Unfor	seen Media Remov	val from (10	) Filter Cells		
1.	Payroli C	osts: Trade See page 2 of Proposal			<u>Hours</u>	<u>Rate</u> \$ \$ \$ \$	<u>Total</u> 84,702.17 - -
						SUBTOTAL: \$	84,702.17
2.	Material 8	& Permanent Equipment: N/A				\$	-
						SUBTOTAL: \$	-
3.	Subcontr	actor Work:	P	rice	Qty.		
						\$ \$ \$	- - -
						SUBTOTAL: \$	<del>-</del>
4.	Suppleme a. b. c. d. e. f. g. h. i. j.	ent Costs: Painting Equipment Welding Supplies  As Builts Office Trailer Expenses Cad Design - For Rigging Plan Bonds & Insurance Adjustment:				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - -
5.	Grand To	otal (Subtotal 1, Subtotal 2, Subtotal 4, Subto	tal 5):			\$	84,702.17
	Contract	Decrease					
6.	Contracto	or Credit				\$	-
	Net Cont	tract Increase					
7	Direct Wo	ork Sub-Total (Increase 5 + Decrease 6)				\$	84,702.17
8		or's Overhead (10%): or's Profit (10%):				\$ \$	8,470.22 9,317.24
9	Subcontr	actor Total (Item 3 Subtotal)				\$	-
10	Subcontr	actor Markup (5% of Item 10 total)				\$	-
11	Bond Pre	emium (0.8% x Lines 8,9):				\$	819.92
12	TOTAL II	NCREASE:				\$	103,309.55

# LABOR BREAKDOWN FOR DISCUSSION PURPOSES ONLY

#### Labor

	<u>Men</u>	<u>Days</u>		<b>Total Hours</b>	Rate	<u>Amount</u>		<u>Total</u>			
PCO#1 Labor Inefficiencies due to Un			<u>emoval fro</u>	m (10) Filter Ce	<u>ells</u>						
Additional Underdrain Tile and Pier Demolition Work											
Additional Labor to Demolish Tiles											
(10) Filter Cell	3	10	8	240	Laborer	\$ 70.16	\$	16,838.47			
` ,	1	10	8	80	Millwright	\$ 89.29	\$	7,143.59			
Additional Rig Tiles out of Cells											
(10) Filter Cell	3	10	8	240	Laborer	\$ 70.16	\$	16,838.47			
	1	10	8	80	Millwright	\$ 89.29	\$	7,143.59			
Inefficiencies Due to Pier Remob											
(10) Filter Cell	3	10	8	240	Laborer	\$ 70.16		16,838.47			
	1	10	8	80	Millwright	\$ 89.29	\$	7,143.59			
Additional Work Due to Filter Media Removal for (10) Filter Cells											
Media Remobilization/Oversight											
Working Foreman	1	10	8	80	Millwright	\$ 89.29	•	•			
Equipment / Hose	1	10	8	80	Laborer	\$ 70.16	\$	5,612.80			

#### NOTES:

TOTAL LABOR \$ 84,702.17

<sup>1.</sup> Labor inefficiencies and re-mobilization efforts resulted in a total of (55) CCD of delay over the course of (10) Filter Cells

#### **Attachment C**

#### NECESSITY FOR CHANGE AND REASON FOR OMISSION FROM PLANS AND SPECIFICATIONS

**Issuing Office:** North Hudson Sewerage Authority

Project Number: \$340952-30

**Modification No: P-03** 

**Box No. 18:** NECESSITY FOR CHANGE AND REASON FOR OMISSION FROM PLANS AND SPECIFICATIONS

- 1. Labor to Remove and Reinstall New 6" DeZurik Butterfly Valves
  - a. The PURAC system contains 10 filter cells in total which among other appurtenances, contains 2 6-inch butterfly valves in each of the 10 filter cells and 3 6-inch butterfly valves for the air saturation tanks for a total of 23 6-inch butterfly valves. The 6-inch butterfly valves located on the filter recycle system must open/close during a backwash cycle. The specified valves were selected as they are AIS compliant, however after installation the valves have become corroded and are failing to properly open/close when required. From the Engle Metallurgical analysis performed by the manufacturer it was apparent that the media in the fluid attacks the carbon steel BHP valve body, causing rust (iron oxide) buildup. In consultation with the manufacturer they feel that the BOS-US butterfly valve would be a better fit for the environment of the PURAC System as the body of the BOS-US valve is ductile iron and is fully lined with nitrile rubber (NBR). The manufacturer will replace these valves at no cost to the Owner, however, there is labor costs associated to this for the Contractor. The change in contract time will be visited at a later time.
- 2. Additional Labor and Time due to Unforeseen Site Conditions during Media Removal (55 additional calendar days)
  - a. Labor Inefficiencies due to Unforeseen Media Removal from ten (10) Filter Cells (55 additional calendar days)- RPM's subcontractor McVac returned to site for the additional media removal and disposal of media from below the underdrains. This was done for all 10 cells. The additional media below the underdrains caused RPM additional labor costs in cells 3 and 4 and time delay for the modified method to demolish and remove the concrete tiles/underdrain.
- 3. (Credit) Unit Price Item U1 Provision for Welded Steel Pipe ALLOWANCE
  - a. Credit to contract as Line Item U1 is not needed in its entirety
- 4. (Credit) Unit Price Item U2 Fuel Pricing Adjustment
  - a. Credit to contract as Line Item U2 is needed in its entirety for fuel pricing adjustments
- 5. (Credit) Unit Price Item U4 Structural Crack Repair
  - a. Credit to contract as Line Item U4 is needed in its entirety for structural concrete repairs

- 6. (Credit) Unit Price Item U6 Overhead Concrete Repair
  - a. Credit to contract as Line Item U6 is needed in its entirety for overhead concrete repairs
- 7. (Credit) Unit Price Item U7 Horizontal Concrete Repair
  - a. Credit to contract as Line Item U7 is needed in its entirety for horizontal concrete repairs
- 8. (Credit) Unit Price Item U8 Steel Pipe Corrosion Inspection ALLOWANCE
  - a. Credit to contract as Line Item U8 is not needed in its entirety for steel pipe inspection
- 9. Contract Time Adjustment for COVID related Media Supplier Change
  - a. Initial Media Installer for Filter Cells 9 and 10 was supposed to start media installation of media on 3/23/20. However, due to COVID travel restrictions, this subcontractor was unable to install media per the schedule. The Contractor was able to find a local sub to fulfil this this work which began on 4/6/20 to keep the project moving as the project is under an ACO. Therefore an addition of 15 calendar days has been added for the change in media supplier for Filter Cells 9 and 10.
- 10. Contract Time Adjustment for Structural Repair in Cells
  - a. Structural repairs were required for each of the cells that were not fully understood until the interior of the cells were demolished. Contractor required 3 working days for each filter cell for a total of 30 working days which equates to about 40 calendar days for this effort.
- 11. Contract Time Adjustment for Skimmer Flight Modifications
  - a. Addition of 10 calendar days due to skimmer flight modifications as a result of supplier produced material requiring field adjustment.
- 12. Contract Time Adjustment for Filter Cell Level Transmitters
  - a. Addition of 5 calendar days due to troubleshooting required for the existing filter cell level transmitter that were approved to be replaced under MOD P-02.