



CONTRACT CHANGE ORDER

CONTRACT NO. CON-17-3850

CITY OF GOODYEAR

190 North Litchfield Road

P. O. Box 5100

Goodyear, Arizona 85338

CHANGE ORDER NO. 1

Project	Goodyear WRF 2MGD Expansion	Project No	WW1302
Consultant/Contractor	Felix Construction Co.		
City Project Manager	Tim Burkeen		
Funding Source: (check all that apply)	☐ Federal	☐ State	☒ City ☐ Other
Date of Council Approval	n/a	COAC No.	n/a
Original Total Amount Approved by Council (include owner contingency amount)	\$n/a		
Original Contract Price	\$149,896		
Prior Change Order(s)	☐ Yes ☒ No	\$0	Total amount of ALL prior change orders (Do not include this amount)
Change Order Amount Requested	\$14,505,863.00		
Adjusted Contract Price (with this change order)	\$14,655,759.00	☒ Increase	☐ Decrease
Original Date of Completion	5/7/18	Date/Days	
Prior Adjusted Date of Completion	5/7/18	Date/Days	
Revised Date of Completion	9/7/19	Date/Days	☒ Increase ☐ Decrease
Performance Bond Adjustment Required	☐ Yes ☒ No		
Payment Bond Adjustment Required	☐ Yes ☒ No		
Close Out Change Order	☐ Yes ☒ No		

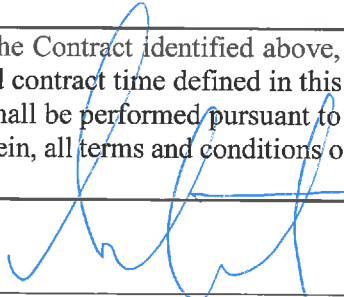
DESCRIPTION OF CHANGE: ☒ See Attachment ☐ Other

In accordance with RFQ 17-3850, the GMP is to be included in the original Agreement CON17-3850. This change order is for the construction phase GMP for the Goodyear Water Reclamation Facility as described in the attached Final Cost Model and the 90% plans and specifications prepared by Waterworks Engineers.

This document constitutes a binding contractual modification of the Contract identified above, and comprises the total compensation due the Consultant/Contractor for the work and contract time defined in this Change Order and it has been determined that it is not practical compete. No work shall be performed pursuant to this Change Order until this document is signed by all Parties. Except as provided herein, all terms and conditions of the Contract shall remain in full force and effect.

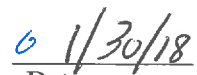

City Project Manager


Date


Consultant/Contractor


Date


City Engineer/
Assistant City Engineer


Date

APPROVED AS TO FORM:

City Procurement Manager

Date

City Attorney

Date



157th AVE WRF PLANT EXPANSION
CITY OF GOODYEAR



Cost Model Development

Engineer: Waterworks Engineers

Cost Model Development				% Plans	60	Plan Date		April 21, 2017		% Plans	90	Plan Date		November 15, 2017		% Plans	90	Plan Date		November 15, 2017		
Engineer: Waterworks Engineers						Date of Est.		06/15/17	Change			Date of Est.		01/12/18	Change			Date of Est.		01/12/18	Change	
#	Area	Priority	Description	Quant	Unit	Unit Price		Total price	from Prior	Quant	Unit	Unit Price		Total price	from Prior	Quant	Unit	Unit Price		Total price	from Prior	Comments
2.09	AERATION	REQ	Demo, Removals	1	LS	\$	29,415	29,415	29,415	1	LS	\$	30,068.59	30,069	653	1	LS	\$	30,068.59	30,069	-	
3.06	AERATION	REQ	Aeration Basin Walls	1	LS	\$	96,643	96,643	96,643	1	LS	\$	-	-	(96,643)	-	LS	\$	-	-	-	Deleted Concrete In-Fill
6.03	AERATION	REQ	FRP Walls & SST Hardware					-	-	1	LS	\$	26,996.00	26,996	26,996	1	LS	\$	26,996.00	26,996	-	Replaced Conc w/FRP
6.04	AERATION	REQ	Slide Gate @ Filter Influent JS	1	LS	\$	12,985	12,985	12,985	1	LS	\$	24,929.00	24,929	11,944	1	LS	\$	24,929.00	24,929	-	
6.05	AERATION	REQ	Spare IMLR Pump	1	LS	\$	45,063	45,063	45,063	1	LS	\$	21,713.00	21,713	(23,350)	-	LS	\$	21,713.00	-	(21,713)	COG to Buy Spare Directly
13.01	AERATION	REQ	Membrane Diffusers	1	LS	\$	144,812	144,812	144,812	1	LS	\$	148,183.75	148,184	3,372	1	LS	\$	148,183.75	148,184	-	
13.02	AERATION	REQ	48" DIP - SE Line (Includes Stub for Future)	600	LF	\$	807	484,141	484,141	600	LF	\$	691.55	414,930	(69,212)	600	LF	\$	691.55	414,930	-	Faster Production
13.03	AERATION	REQ	36" DIP Bypass	50	LF	\$	710	35,481	35,481	50	LF	\$	1,248.36	62,418	26,937	50	LF	\$	1,248.36	62,418	-	Faster Production
			Subtotal for Aeration Basin Work	1	LS			848,541	848,541	1	LS			729,238	(119,303)	1	LS			707,525	(21,713)	
2.05	CCB	REQ	SS Manholes	1	LS	\$	32,852	32,852	32,852	1	LS	\$	32,852.00	32,852	(0)	1	LS	\$	32,852.00	32,852	-	
2.18	CCB	REQ	Demo, Abandonment, Salvage, Removals	1	LS	\$	3,113	3,113	3,113	1	LS	\$	2,712.50	2,713	(400)	1	LS	\$	2,712.50	2,713	-	Deleted Chemical Drain
2.19	CCB	REQ	CCB Ex/Shore/BF/Prep	1	LS	\$	207,348	207,348	207,348	1	LS	\$	212,039.49	212,039	4,692	1	LS	\$	212,039.49	212,039	-	
2.20	CCB	REQ	Remove Berm @ Shooting Range	1	LS	\$	31,981	31,981	31,981	1	LS	\$	8,200.00	8,200	(23,781)	1	LS	\$	8,200.00	8,200	-	
2.21	CCB	REQ	Filter Influent Junction Structure	1	LS	\$	42,404	42,404	42,404	1	LS	\$	54,615.91	54,616	12,212	1	LS	\$	54,615.91	54,616	-	
3.19	CCB	REQ	Chlorine Contact Basin	1	LS	\$	631,740	631,740	631,740	1	LS	\$	654,243.44	654,243	22,503	1	LS	\$	654,243.44	654,243	-	
4.01	CCB	REQ	IPS Electrical Building	1	LS	\$	55,200	55,200	55,200	1	LS	\$	19,652.00	19,652	(35,548)	1	LS	\$	19,652.00	19,652	-	
5.07	CCB	REQ	Handrail, Checker Plate & Catwalk	1	LS	\$	40,000	40,000	40,000	1	LS	\$	25,425.00	25,425	(14,575)	1	LS	\$	25,425.00	25,425	-	
5.08	CCB	REQ	Paint - CL2 & Turbidity Analyzer Piping	1	LS	\$	2,000	2,000	2,000	1	LS	\$	2,000.00	2,000	-	1	LS	\$	2,000.00	2,000	-	
5.09	CCB	REQ	Chemical Coating of Chemical Area West	1	LS	\$	11,375	11,375	11,375	1	LS	\$	30,750.00	30,750	19,375	1	LS	\$	30,750.00	30,750	-	
5.10	CCB	REQ	Relocate SBS Tank & Re-Pipe	1	LS	\$	2,634	2,634	2,634	1	LS	\$	-	-	(2,634)	-	LS	\$	-	-	-	
5.11	CCB	REQ	Slide Gates @ Filter Structure	1	LS	\$	21,722	21,722	21,722	1	LS	\$	21,810.00	21,810	88	1	LS	\$	21,810.00	21,810	-	
5.12	CCB	REQ	Vert Mixer	1	LS	\$	56,232	56,232	56,232	1	LS	\$	41,010.00	41,010	(15,222)	1	LS	\$	41,010.00	41,010	-	
5.13	CCB	REQ	250 HP VT Pumps @ Reuse PS	1	LS	\$	303,365	303,365	303,365	1	LS	\$	445,260.50	445,261	141,896	1	LS	\$	445,260.50	445,261	-	
5.14	CCB	REQ	CCB Sample Pump Skids	1	LS	\$	16,389	16,389	16,389	1	LS	\$	38,301.00	38,301	21,912	1	LS	\$	38,301.00	38,301	-	
5.15	CCB	REQ	Slide Gate @ CCB	1	LS	\$	11,861	11,861	11,861	1	LS	\$	11,905.00	11,905	44	1	LS	\$	11,905.00	11,905	-	
5.16	CCB	REQ	Rebuild Chemical Metering Pump Skid	1	LS	\$	30,783	30,783	30,783	1	LS	\$	66,160.00	66,160	35,377	1	LS	\$	66,160.00	66,160	-	
5.17	CCB	REQ	Relocate Sample Pump to CCB Area	1	LS	\$	1,730	1,730	1,730	1	LS	\$	1,730.00	1,730	-	1	LS	\$	1,730.00	1,730	-	
13.03	CCB	REQ	Shade Fabric @ W&S Side of Chemical Area	1	LS	\$	9,120	9,120	9,120	1	LS	\$	9,110.00	9,110	(10)	1	LS	\$	9,110.00	9,110	-	
13.04	CCB	REQ	CL2 Analyzer Panel	1	LS	\$	14,429	14,429	14,429	1	LS	\$	14,440.25	14,440	11	1	LS	\$	14,440.25	14,440	-	
13.05	CCB	REQ	Shade Canopies @ Sample Stations	1	LS	\$	20,000	20,000	20,000	1	LS	\$	23,700.00	23,700	3,700	1	LS	\$	23,700.00	23,700	-	
13.06	CCB	REQ	Shade System for CCB Channels	1	LS	\$	31,722	31,722	31,722	1	LS	\$	31,810.00	31,810	88	1	LS	\$	31,810.00	31,810	-	
13.09	CCB	REQ	TTHM System	1				-	-	1	LS	\$	60,770.00	60,770	60,770	1	LS	\$	60,770.00	60,770	-	Added TTHM System
13.10	CCB	REQ	48" DIP TE Line to Disc Filter - CCB	320	LF	\$	329	105,334	105,334	320	LF	\$	273.56	87,541	(17,794)	320	LF	\$	273.56	87,541	-	
13.11	CCB	REQ	3" DIP RE Line Around CCB	425	LF	\$	92	38,989	38,989	425	LF	\$	77.34	32,871	(6,119)	425	LF	\$	77.34	32,871	-	
13.12	CCB	REQ	1/2" Tube Inside 3" Containment Pipe SHC	300	LF	\$	113	33,810	33,810	300	LF	\$	54.44	16,332	(17,478)	300	LF	\$	54.44	16,332	-	
13.13	CCB	REQ	1-1/2 PVC Sample Lines SL @ CCB	260	LF	\$	33	8,670	8,670	260	LF	\$	27.21	7,075	(1,595)	260	LF	\$	27.21	7,075	-	
13.14	CCB	REQ	24" DIP Overflow (OF) Line @ CCB	20	LF	\$	491	9,811	9,811	20	LF	\$	362.15	7,243	(2,568)	20	LF	\$	362.15	7,243	-	
13.15	CCB	REQ	18" & 24" PVC TE Line @ Disc Filters	60	LF	\$	463	27,764	27,764	60	LF	\$	330.87	19,852	(7,912)	60	LF	\$	330.87	19,852	-	
13.16	CCB	REQ	CL2 & Turbidity Analyzer Piping	1	LS	\$	7,008	7,008	7,008	1	LS	\$	7,008.00	7,008	-	1	LS	\$	7,008.00	7,008	-	
13.17	CCB	REQ	Electrical Bldg HVAC System	1	LS	\$	35,000	35,000	35,000	1	LS	\$	15,286.00	15,286	(19,714)	1	LS	\$	15,286.00	15,286	-	
16.02	CCB	REQ	Electrical GMP-2	1	LS	\$	232,000	232,000	232,000	1	LS	\$	397,515.00	397,515	165,515	-	LS	\$	397,515.00	-	(397,515)	Combined to GMP-2
			Subtotal for Chlorine Contact Basin	1	LS			2,076,385	2,076,385	1	LS			2,399,220	322,834	-	LS			2,001,705	(397,515)	
2.06	IPS	REQ	SS Manholes (Includes 2 Add'l for MOPO)	1	LS	\$	131,408	131,408	131,408	1	LS	\$	140,272.68	140,273	8,865	1	LS	\$	140,272.68	140,273	-	
2.14	IPS	ALT	Demo, Abandonment, Salvage, Removals	1	LS	\$	51,343	51,343	51,343	1	LS	\$	51,343.25	51,343	-	1	LS	\$	51,343.25	51,343	-	
2.15	IPS	REQ	Electrical Bldg Ex/BF/Prep	1	LS	\$	14,940	14,940	14,940	1	LS	\$	19,996.16	19,996	5,056	1	LS	\$	19,996.16	19,996	-	Includes Cent Bldg
2.16	IPS	REQ	Influent Pump Station Ex/Shore/BF/Prep	1	LS	\$	77,689	77,689	77,689	1	LS	\$	119,618.88	119,619	41,930	1	LS	\$	119,618.88	119,619	-	
2.17	IPS	REQ	Influent Junction Structure	1	LS	\$	43,456	43,456	43,456	1	LS	\$	76,465.26	76,465	33,010	1	LS	\$	76,465.26	76,465	-	
3.11	IPS	REQ	Dumpster Drain SOG Area w/Curb	1	LS	\$	9,165	9,165	9,165	1	LS	\$	9,307.51	9,308	142	1	LS	\$	9,307.51	9,308	-	
3.12	IPS	REQ	Electrical Building	1	LS	\$	20,356	20,356	20,356	1	LS	\$	24,044.37	24,044	3,689	1	LS	\$	24,044.37	24,044	-	Added pad
3.13	IPS	REQ	Influent Pump Station	1	LS	\$	140,016	140,016	140,016	1	LS	\$	141,731.40	141,731	1,716	1	LS	\$	141,731.40	141,731	-	
3.14	IPS	REQ	Odor Control SOG w/Curb	1	LS	\$	18,859	18,859	18,859	1	LS	\$	19,391.77	19,392	532	1	LS	\$	19,391.77	19,392	-	
3.15	IPS	REQ	Meter Area Pad (Pipe Support Pad)	1</																		



157th AVE WRF PLANT EXPANSION
CITY OF GOODYEAR



Cost Model Development

Engineer: Waterworks Engineers				Complete Project				Complete Project				GMP - 1 ONLY (COST MODEL FOR 2 MGD UPGRADE)				Goodyear			
				% Plans	60	Plan Date		April 21, 2017	% Plans	90	Plan Date		November 15, 2017						
				Date of Est.		06/15/17		Change	Date of Est.		01/12/18		Change	Date of Est.		01/12/18		Change	Comments
#	Area	Priority	Description	Quant	Unit	Unit Price	Total price	from Prior	Quant	Unit	Unit Price	Total price	from Prior	Quant	Unit	Unit Price	Total price	from Prior	
10.02	IPS	REQ	6 CY Grit Dewatering Container	1	LS	\$ 15,132	15,132	15,132	1	LS	\$ 15,131.75	15,132	-	1	LS	\$ 15,131.75	15,132	-	
10.03	IPS	REQ	IPS Submersible Pumps	1	LS	\$ 209,220	209,220	209,220	1	LS	\$ 196,748.00	196,748	(12,472)	1	LS	\$ 196,748.00	196,748	-	
13.02	IPS	REQ	Odor Control System @ IPS	1	LS	\$ 181,975	181,975	181,975	1	LS	\$ 124,518.50	124,519	(57,456)	1	LS	\$ 124,518.50	124,519	-	
14.02	IPS	REQ	Motorized Mono Rail Crane System	1	LS	\$ 40,000	40,000	40,000	1	LS	\$ 30,540.00	30,540	(9,460)	1	LS	\$ 30,540.00	30,540	-	
15.01	IPS	REQ	24" HDPE DR-17 Force Main - 19' Deep	600	LF	\$ 262	157,446	157,446	600	LF	\$ 244.61	146,765	(10,682)	600	LF	\$ 244.61	146,765	-	Faster Production
15.02	IPS	REQ	36" PVC Sanitary Sewer Line	145	LF	\$ 491	71,227	71,227	145	LF	\$ 221.44	32,109	(39,119)	145	LF	\$ 221.44	32,109	-	Faster Production
15.03	IPS	REQ	8" DIP Plant Drain (PD)	42	LF	\$ 395	16,601	16,601	42	LF	\$ 366.34	15,386	(1,214)	42	LF	\$ 366.34	15,386	-	Faster Production
15.04	IPS	REQ	18" DIP Plant Drain (PD)	100	LF	\$ 180	18,004	18,004	100	LF	\$ 130.10	13,010	(4,994)	100	LF	\$ 130.10	13,010	-	Faster Production
15.05	IPS	REQ	24" PVC Plant Drain from Ex. MH 3	100	LF	\$ 203	20,347	20,347	100	LF	\$ 144.54	14,454	(5,893)	100	LF	\$ 144.54	14,454	-	Faster Production
15.06	IPS	REQ	24" DIP Force Main (FM) LS - Meter	70	LF	\$ 488	34,183	34,183	70	LF	\$ 422.82	29,597	(4,586)	70	LF	\$ 422.82	29,597	-	
15.07	IPS	REQ	2" RE & DR Line from Odor Control	80	LF	\$ 38	3,055	3,055	80	LF	\$ 35.79	2,863	(192)	80	LF	\$ 35.79	2,863	-	
15.08	IPS	REQ	20" Foul Air (FA) Duct LS-Odor Control	30	LF	\$ 233	6,993	6,993	30	LF	\$ 1,490.56	44,717	37,723	30	LF	\$ 1,490.56	44,717	-	
15.09	IPS	REQ	6" DIP Drain (DR) Line @ Dumpster Pad	36	LF	\$ 130	4,695	4,695	36	LF	\$ 133.33	4,800	105	36	LF	\$ 133.33	4,800	-	
15.10	IPS	REQ	Influent Pump Station & Odor Control	1	LS	\$ 173,191	173,191	173,191	1	LS	\$ 120,377.50	120,377	(52,813)	1	LS	\$ 120,377.50	120,377	-	
16.06	IPS	REQ	Excavation and Backfill				-	-	1	LS	\$ 71,531.74	71,532	71,532	1	LS	\$ 71,531.74	71,532	-	
16.03	IPS	REQ	Influent Pump Station	1	LS	\$ 571,000	571,000	571,000	1	LS	\$ -	-	(571,000)	1	LS	\$ -	-	-	
			Subtotal for Influent Pump Station	1	LS		2,256,703	2,256,703	1	LS		1,728,098	(528,605)	1	LS		1,728,098	-	
16.04	NPW	ALT	6" DIP RE Line Extension	25	LF	\$ 291	7,277	7,277	25	LF	\$ 353.46	8,837	1,559	25	LF	\$ 353.46	8,837	-	
16.05	NPW	ALT	6" Drain (DR) Line @ Chemical Area	40	LF	\$ 94	3,742	3,742	40	LF	\$ 91.70	3,668	(74)	40	LF	\$ 91.70	3,668	-	
16.05	NPW	ALT	4" PVC RE Line(s)	220	LF	\$ 66	14,417	14,417	136	LF	\$ 73.46	9,990	(4,426)	136	LF	\$ 73.46	9,990	-	Less Quantity
			Subtotal for Non-Potable Water	1	LS		25,436	25,436	1	LS		22,495	(2,942)	1	LS		22,495	-	Less Quantity
2.22	RAS/WAS	REQ	Demo, Abandonment, Salvage, Removals	1	LS	\$ 2,136	2,136	2,136	1	LS	\$ 2,191.25	2,191	55	1	LS	\$ 2,191.25	2,191	-	
2.23	RAS/WAS	REQ	Grout and Patchwork	1	LS	\$ 1,580	1,580	1,580	1	LS	\$ 1,580.00	1,580	-	1	LS	\$ 1,580.00	1,580	-	
2.24	RAS/WAS	REQ	Paint - West RAS/WAS Pump Station	1	LS	\$ 7,000	7,000	7,000	1	LS	\$ 7,000.00	7,000	-	1	LS	\$ 7,000.00	7,000	-	
2.25	RAS/WAS	REQ	Paint - East RAS/WAS Pump Station	1	LS	\$ 5,000	5,000	5,000	1	LS	\$ 5,000.00	5,000	-	1	LS	\$ 5,000.00	5,000	-	
2.26	RAS/WAS	REQ	Install Owner Furnished RAS Pumps	1	LS	\$ 10,125	10,125	10,125	1	LS	\$ 10,562.00	10,562	438	1	LS	\$ 10,562.00	10,562	-	FCC to Purchase 3rd Pump
2.27	RAS/WAS	REQ	West RAS/WAS Pump Station	1	LS	\$ 122,705	122,705	122,705	1	LS	\$ 94,347.14	94,347	(28,358)	1	LS	\$ 93,622.14	93,622	(725)	
2.28	RAS/WAS	REQ	East RAS/WAS Pump Station	1	LS	\$ 11,706	11,706	11,706	1	LS	\$ 10,485.70	10,486	(1,220)	1	LS	\$ 10,485.70	10,486	-	
16.05	RAS/WAS	REQ	RAS/WAS	1	LS	\$ 143,000	143,000	143,000	1	LS	\$ -	-	(143,000)	1	LS	\$ -	-	-	
			Subtotal for RAS/WAS Work	1	LS		303,252	303,252	1	LS		131,166	(172,086)	1	LS		130,441	(725)	
2.07	RECLAIM	ALT	Demo & Replace AC Pavement	1	LS	\$ 5,605	5,605	5,605	1	LS	\$ 5,604.69	5,605	-	-	LS	\$ 5,604.69	-	(5,605)	
2.08	RECLAIM	REQ	Rip Rap	1	LS	\$ 8,124	8,124	8,124	1	LS	\$ 6,914.34	6,914	(1,210)	-	LS	\$ 6,914.34	-	(6,914)	
2.10	RECLAIM	ALT	Demo, Abandonment, Salvage, Removals	1	LS	\$ 26,346	26,346	26,346	1	LS	\$ 26,433.50	26,434	88	1	LS	\$ 26,433.50	26,434	-	
3.03	RECLAIM	ALT	SBS Storage Tank Pad	1	LS	\$ 1,930	1,930	1,930	1	LS	\$ -	-	(1,930)	-	LS	\$ -	-	-	Deleted
3.04	RECLAIM	ALT	Pipe Supports	1	LS	\$ 7,321	7,321	7,321	1	LS	\$ 7,341.51	7,342	20	-	LS	\$ 7,341.51	-	(7,342)	Added Footing
3.05	RECLAIM	ALT	Curb & Gutter @ Reclaim PS	1	LS	\$ 3,996	3,996	3,996	1	LS	\$ -	-	(3,996)	-	LS	\$ -	-	-	Deleted
3.06	RECLAIM	REQ	Paint - 36" DIP RE Reservoir Piping	1	LS	\$ 5,000	5,000	5,000	1	LS	\$ 5,000.00	5,000	-	1	LS	\$ 5,000.00	5,000	-	
3.07	RECLAIM	REQ	Paint - Reuse Pump Station	1	LS	\$ 5,000	5,000	5,000	1	LS	\$ 5,000.00	5,000	-	1	LS	\$ 5,000.00	5,000	-	
3.08	RECLAIM	REQ	Paint - Pressure Sustaining Valve (PSV) Station	1	LS	\$ 2,000	2,000	2,000	1	LS	\$ 2,000.00	2,000	-	1	LS	\$ 2,000.00	2,000	-	
3.09	RECLAIM	REQ	20" DIP TE Line @ PSV Station	15	LF	\$ 1,026	15,391	15,391	15	LF	\$ 1,019.74	15,296	(94)	15	LF	\$ 1,019.74	15,296	-	
3.10	RECLAIM	REQ	36" DIP RE Line CCB - Reservoir	470	LF	\$ 548	257,549	257,549	200	LF	\$ 902.83	180,566	(76,983)	200	LF	\$ 902.83	180,566	-	Less Quantity
3.11	RECLAIM	REQ	36" DIP RE Reservoir Piping	1	LS	\$ 112,265	112,265	112,265	1	LS	\$ -	-	(112,265)	-	LS	\$ -	-	-	
3.12	RECLAIM	REQ	Reuse Pump Station	1	LS	\$ 154,286	154,286	154,286	1	LS	\$ 119,843.98	119,844	(34,442)	1	LS	\$ 119,843.98	119,844	-	
3.13	RECLAIM	REQ	Pressure Sustaining Valve (PSV) Station	1	LS	\$ 50,351	50,351	50,351	1	LS	\$ 35,835.53	35,836	(14,516)	1	LS	\$ 35,835.53	35,836	-	
			Subtotal for Reclaim Water Work	1	LS		655,164	655,164	1	LS		409,836	(245,328)	1	LS		389,975	(19,	



157th AVE WRF PLANT EXPANSION
CITY OF GOODYEAR



Cost Model Development

Complete Project									Complete Project					GMP - 1 ONLY (COST MODEL FOR 2 MGD UPGRADE)							Goodyear					
Engineer: Waterworks Engineers				% Plans	60	Plan Date		April 21, 2017			% Plans	90	Plan Date		November 15, 2017			% Plans	90	Plan Date		November 15, 2017			Comments	
#	Area	Priority	Description	Quant	Unit	Unit Price	Total price	from Prior	Quant	Unit	Unit Price	Total price	from Prior	Quant	Unit	Unit Price	Total price	from Prior	Quant	Unit	Unit Price	Total price	from Prior			
2.11	SLUDGE	REQ	Demo, Abandonment, Salvage, Removals	1	LS	\$ 30,981	30,981	30,981	1	LS	\$ 29,547.38	29,547	(1,434)	-	LS	\$ 29,547.38	-	(29,547)	-	-	LS	\$ 29,547.38	-	(29,547)		
2.12	SLUDGE	REQ	Centrifuge Area Ex/BF/Prep	1	LS	\$ 37,317	37,317	37,317	1	LS	\$ 40,254.86	40,255	2,938	-	LS	\$ 40,254.86	-	(40,255)	-	-	LS	\$ 40,254.86	-	(40,255)		
2.13	SLUDGE	REQ	Scum Pump Station Wet Well	1	LS	\$ 68,987	68,987	68,987	1	LS	\$ 56,052.43	56,052	(12,934)	-	LS	\$ 56,052.43	-	(56,052)	-	-	LS	\$ 56,052.43	-	(56,052)		
3.07	SLUDGE	REQ	Centrifuge Area SOG Includes Trench & Sump	1	LS	\$ 104,716	104,716	104,716	1	LS	\$ 116,305.76	116,306	11,589	-	LS	\$ 116,305.76	-	(116,306)	-	-	LS	\$ 116,305.76	-	(116,306)	Thrust Blocks for Pumps	
3.08	SLUDGE	REQ	Scum PS Discharge Pipe SOG	1	LS	\$ 10,138	10,138	10,138	1	LS	\$ 10,309.59	10,310	171	-	LS	\$ 10,309.59	-	(10,310)	-	-	LS	\$ 10,309.59	-	(10,310)		
3.09	SLUDGE	REQ	Blower SOG	1	LS	\$ 13,629	13,629	13,629	1	LS	\$ 16,586.07	16,586	2,957	-	LS	\$ 16,586.07	-	(16,586)	-	-	LS	\$ 16,586.07	-	(16,586)		
3.10	SLUDGE	REQ	Weir Gate Walls @ South Ox Ditch	1	LS	\$ 9,173	9,173	9,173	1	LS	\$ 9,485.28	9,485	313	-	LS	\$ 9,485.28	-	(9,485)	-	-	LS	\$ 9,485.28	-	(9,485)		
4.02	SLUDGE	ALT	Centrifuge Electrical Building				-	-	1	LS	\$ 14,756.00	14,756	14,756	-	LS	\$ 14,756.00	-	(14,756)	-	-	LS	\$ 14,756.00	-	(14,756)		
5.03	SLUDGE	REQ	Aluminum Handrail @ South Ox Ditch	1	LS	\$ 30,000	30,000	30,000	1	LS	\$ 184,210.00	184,210	154,210	-	LS	\$ 184,210.00	-	(184,210)	-	-	LS	\$ 184,210.00	-	(184,210)		
5.04	SLUDGE	REQ	Pipe Trestle & Support System for LS	1	LS	\$ 100,000	100,000	100,000	1	LS	\$ 75,381.00	75,381	(24,619)	-	LS	\$ 75,381.00	-	(75,381)	-	-	LS	\$ 75,381.00	-	(75,381)		
6.02	SLUDGE	REQ	Drywall Systm @ Centrifuge Bldg				-	-	1	LS	\$ 9,907.60	9,908	9,908	-	LS	\$ 9,907.60	-	(9,908)	-	-	LS	\$ 9,907.60	-	(9,908)	Replaced Conc w/FRP	
7.01	SLUDGE	REQ	Crack Repair	1	LS	\$ 96,615	96,615	96,615	1	LS	\$ -	-	(96,615)	1	LS	\$ -	-	-	-	1	LS	\$ -	-	-	-	
7.04	SLUDGE	REQ	Standing Seam Metal Roof and Insulation @ Centrifuge Bldg				-	-	1	LS	\$ 10,000.00	10,000	10,000	-	LS	\$ 10,000.00	-	(10,000)	-	-	LS	\$ 10,000.00	-	(10,000)		
8.02	SLUDGE	ER	Doors & Hardware		LS	\$ 14,500	-	-	1	LS	\$ -	7,110	7,110	-	LS	\$ -	-	(7,110)	-	-	LS	\$ -	-	(7,110)		
8.03	SLUDGE	REQ	Paint - 12" DIP RE BPV Station	1	LS	\$ 4,000	4,000	4,000	1	LS	\$ 4,000.00	4,000	-	1	LS	\$ 4,000.00	4,000	-	-	LS	\$ 4,000.00	4,000	-	-		
8.04	SLUDGE	REQ	Paint - Centrifuge Area Piping	1	LS	\$ 2,000	2,000	2,000	1	LS	\$ 2,000.00	2,000	-	1	LS	\$ 2,000.00	2,000	-	-	LS	\$ 2,000.00	2,000	-	-		
10.02	SLUDGE	ALT	FM-200 Fire Suppression System		LS	\$ 30,000	-	-	1	LS	\$ 20,000.00	20,000	20,000	-	LS	\$ 20,000.00	-	(20,000)	-	-	LS	\$ 20,000.00	-	(20,000)		
10.03	SLUDGE	REQ	Blowers and Mixing Pumps	1	LS	\$ 811,218	811,218	811,218	1	LS	\$ 388,104.00	388,104	(423,114)	-	LS	\$ 388,104.00	-	(388,104)	-	-	LS	\$ 388,104.00	-	(388,104)	Aeration & Mixers	
10.04	SLUDGE	REQ	Floating Decanters	1	LS	\$ 48,166	48,166	48,166	1	LS	\$ 48,430.00	48,430	264	-	LS	\$ 48,430.00	-	(48,430)	-	-	LS	\$ 48,430.00	-	(48,430)		
10.05	SLUDGE	REQ	Rotor Baffle	1	LS	\$ 20,744	20,744	20,744	1	LS	\$ 13,240.00	13,240	(7,504)	-	LS	\$ 13,240.00	-	(13,240)	-	-	LS	\$ 13,240.00	-	(13,240)	Rotors will not be used	
10.06	SLUDGE	REQ	Scum Pumps	1	LS	\$ 43,733	43,733	43,733	1	LS	\$ 28,508.00	28,508	(15,225)	-	LS	\$ 28,508.00	-	(28,508)	-	-	LS	\$ 28,508.00	-	(28,508)		
10.07	SLUDGE	REQ	Centrifuge, Polymer & Grinder	1	LS	\$ 792,440	792,440	792,440	1	LS	\$ 717,536.00	717,536	(74,904)	-	LS	\$ 717,536.00	-	(717,536)	-	-	LS	\$ 717,536.00	-	(717,536)		
10.08	SLUDGE	REQ	Weir Gate @ South Ox Ditch	1	LS	\$ 17,825	17,825	17,825	1	LS	\$ 17,913.00	17,913	88	-	LS	\$ 17,913.00	-	(17,913)	-	-	LS	\$ 17,913.00	-	(17,913)		
13.10	SLUDGE	REQ	Additional Shade Structures				-	-	1	LS	\$ 140,740.00	140,740	140,740	1	LS	\$ 140,740.00	140,740	-	-	LS	\$ 140,740.00	140,740	-	-		
14.01	SLUDGE	REQ	Davit Crane	1	LS	\$ 4,230	4,230	4,230	1	LS	\$ 4,230.00	4,230	-	1	LS	\$ 4,230.00	4,230	-	-	LS	\$ 4,230.00	4,230	-	-		
14.02	SLUDGE	REQ	Centrifuge Bldg HVAC System				-	-	1	LS	\$ 15,000.00	15,000	15,000	-	LS	\$ 15,000.00	-	(15,000)	-	-	LS	\$ 15,000.00	-	(15,000)		
16.04	SLUDGE	REQ	Centrifuge & Ox Ditch	1	LS	\$ 257,000	257,000	257,000	1	LS		-	(257,000)	1	LS		-	-	-	1	LS		-	-	-	
			Subtotal for Sludge Area Work	1	LS		2,502,913	2,502,913	1	LS		1,979,607	(523,306)	1	LS		150,970	(1,828,637)	-	-	LS		150,970	(1,828,637)	-	
5.02	CENT	REQ	Removable Bollards Complete Less Paint	1	LS	\$ 7,620	7,620	7,620	1	LS	\$ 3,620.00	3,620	(4,000)	-	LS	\$ 3,620.00	-	(3,620)	-	-	LS	\$ 3,620.00	-	(3,620)		
5.03	CENT	REQ	Paint Removable Bollards	1	LS	\$ 600	600	600	1	LS	\$ 600.00	600	-	-	LS	\$ 600.00	-	(600)	-	-	LS	\$ 600.00	-	(600)		
5.04	CENT	REQ	Ex. Centrifuge to RVWRF	1	LS	\$ 6,444	6,444	6,444	1	LS	\$ 6,620.00	6,620	176	-	LS	\$ 6,620.00	-	(6,620)	-	-	LS	\$ 6,620.00	-	(6,620)		
5.05	CENT	REQ	16" DIP TE Line by Canal	30	LF	\$ 307	9,219	9,219	30	LF	\$ 280.41	8,412	(806)	30	LF	\$ 280.41	8,412	-	-	LF	\$ 280.41	8,412	-	-		
5.06	CENT	REQ	2", 6" & 8" DIP Sludge & RE Lines	1233	LF	\$ 88	108,691	108,691	1,233	LF	\$ 79.64	98,198	(10,494)	-	LF	\$ 79.64	-	(98,198)	-	-	LF	\$ 79.64	-	(98,198)		
5.07	CENT	REQ	12" DIP TE Back Pressure Valve Station	40	LF	\$ 235	9,385	9,385	40	LF	\$ 278.00	11,120	1,735	40	LF	\$ 278.00	11,120	-	-	LF	\$ 278.00	11,120	-	-		
15.28	CENT	REQ	12" DIP RE BPV Station	1	LS	\$ 17,882	17,882	17,882	1	LS	\$ 18,126.82	18,127	244	1	LS	\$ 18,126.82	18,127	-	-	LS	\$ 18,126.82	18,127	-	-		
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157th AVE WRF PLANT EXPANSION
CITY OF GOODYEAR



Cost Model Development

Engineer: Waterworks Engineers

Cost Model Development				% Plans		60		Plan Date		April 21, 2017				% Plans		90		Plan Date		November 15, 2017				% Plans		90		Plan Date		November 15, 2017				
Engineer: Waterworks Engineers								Date of Est.		06/15/17		Change						Date of Est.		01/12/18		Change						Date of Est.		01/12/18		Change		
#	Area	Priority	Description	Quant	Unit	Unit Price		Total price		from Prior		Quant	Unit	Unit Price		Total price		from Prior		Quant	Unit	Unit Price		Total price		from Prior				Comments				
		REQ	Payment & Performance Bonds	0.77%	%	\$	14,053,664	108,727		108,727		0.78%	%	\$	12,226,615.15	101,707		(7,020)		0.96%	%	\$	8,741,958.77	83,923		(17,784)								
		REQ	Taxes	6.37%	%	\$	13,314,272	848,119		848,119		6.37%	%	\$	11,164,134.86	785,314		(62,805)		6.37%	%	\$	7,982,482.57	508,484		(276,830)								
Subtotal Fee, Bond, Tax								2,678,747		2,678,747						2,481,127		(197,620)						1,732,001		(749,126)								
GRAND TOTAL								\$ 14,162,391		14,162,391						\$ 13,113,637		(1,048,754)						\$ 9,334,366		(3,779,271)								
PROJECT TEAM (PRECONSTRUCTION)																																		
		REQ	Project Manager (including pick-up)	456	MH	\$	90.55	41,292		41,292			MH	\$	68.25	-		-			MH	\$	68.25	-		-								
		REQ	Project Engineer (including pick-up)	30	MH	\$	79.77	2,393		2,393			MH	\$	72.00	-		-			MH	\$	72.00	-		-								
		REQ	Electrical Project Manager (including pick-up)	208	MH	\$	90.55	18,835		18,835			MH	\$	55.00	-		-			MH	\$	55.00	-		-								
		REQ	Administrative	58	MH	\$	40.96	2,376		2,376			MH	\$	35.00	-		-			MH	\$	35.00	-		-								
		REQ	Reimbursable Allowances	1	LS	\$	85,000.00	85,000		85,000			MH	\$	35.00	-		-			MH	\$	35.00	-		-								
Subtotal Project Team (Preconstruction)								149,896		149,896						-		0						-		0								
CONTINGENCIES																																		
		REQ	Contingency - Contractor's					-		-						-		-						-		-								
		ALT	Shop Improvements Allowance	1	LS							1	LS	\$	150,000.00	150,000		150,000																
		ALT	Security features Allowance	1	LS							1	LS	\$	100,000.00	100,000		100,000																
		ALT	New Wall/fence Allowance	1	LS							1	LS	\$	200,000.00	200,000		200,000																
		ALT	Additional paving Allowance	1	LS							1	LS	\$	100,000.00	100,000		100,000																
		ALT	Rotating Scum Baffles Allowance	1	LS							1	LS	\$	200,000.00	200,000		200,000																
		ALT	Chain and Flight Systems Allowance	1	LS							1	LS	\$	150,000.00	150,000		150,000																
		REQ	Contingency - Owner's	5.00%	%	\$	10,695,671	534,784		534,784		5.00%		\$	9,844,535.99	492,227		(42,557)		5.00%		\$	6,942,688.85	347,134		(145,092)								
		REQ	Contingency - Other					-		-						-		-						-		-								
CONTINGENCIES								\$ 534,784		534,784						\$ 1,392,227		857,443						\$ 347,134		(145,092)								
GRAND TOTAL WITH CONTINGENCIES								\$ 14,847,070		14,847,070						\$ 14,505,863		(341,206)						\$ 9,681,500		(4,824,363)								