



## Staff Report

**TO:** City Council  
**FROM:** Todd Parton, City Manager  
**DATE:** December 21, 2021  
**SUBJECT:** Resolution Authorizing the Execution of Change Order No. 23 with W.M. Lyles, Co. to Install a New Membrane System in the Wastewater Treatment Plant for the Wastewater Treatment Plant Upgrade/Expansion in the Amount Not to Exceed \$5,143,400 for the Replacement MBR System

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### Background and Analysis:

#### Wastewater Treatment Plant Change Order No. 23:

The City of Beaumont has constructed an upgrade/expansion project at the existing wastewater treatment plant (WWTP). A crucial part of this project is the conversion to membrane bioreactor (MBR) treatment technology.

It is recommended that the City transition to and install the Suez MBR System. The Suez system is a hollow fiber membrane formerly known as Zenon and GE.

#### Summary of Change Order No. 23 Costs:

The cost associated with this change order is in the amount not to exceed \$5,143,400 with the attached project schedule. The summary and details for each previously approved change order are shown below.

#### Wastewater Treatment Plant Change Order Summary:

CO No.	Description	Reason for Change	Amount
1	MBR System Improvements	Enhance the performance of MBR System	\$149,741.00

2	RO System Electrical Modifications & Storm Drain System Material Change	Design & Material Updates	(\$245.00)
3	New Aeration Basin 1 through 3 Excavation	Conflict with Existing Utilities	\$19,998.00
4	Structural and Mechanical Modifications	Pre-Selected Submittals	\$57,450.64
5	Vactor Truck Dump Station Modifications	Conflict with Construction	NTE \$15,000.00
6	EDI/Fine Coarse Bubble Diffuser Equipment	Design Change	\$24,298.00
7	Various Changes – MBR/RO Structural, Site Civil & Headworks SCADA Design Modifications	Design Changes	\$59,167.49
8	Various Changes - Demolition, Piping Realignment, Material Change, and Electric Actuated Valve Voltage Change	Unforeseen Conditions and Value Engineering	\$6,067.00
9	Various Changes - Solids Handling Bldg. Conveyor Capacity Increase, Electrical Yard Vault Cover Changes, Additional Pothole Investigation and Existing Duct Bank Removal, and Yard Utilities	Design Changes, Conflict with Construction, Owner Requested Changes	\$138,531.73
10	MBR Chemical Area Changes & Other Misc. Changes and Inclement Weather Impact Nov-18 to May-19	Owner Requested Changes & Inclement Weather	\$596,031.05

11	Frontier Internet Provider Duct Bank Modifications, 30-inch MBR & 20-inch Plant Effluent Pipeline Elevation and Alignment Modifications, Additional Safety Required Handrail at Retaining Wall and Generator	Design Changes, & Conflict with Construction	\$81,128.29
12	RO-Sulfuric Acid Chemical Piping Material Change, Solids Feed Pump TR/TSH Thermocouple Elements, Solids Handling Bldg. Changes	Design Changes, Owner Requested Changes	\$91,417.26
13	Plant Effluent Chemical Area Changes	Owner Requested Changes	\$404,821.33
14	ADA Compliance Men's – Women's Restroom Modifications & SCE Required Additional 4/0 Ground Cable	Design Changes & SCE Requirements	\$12,311.12
15	Aeration Basin 24" Air Piping Block-outs and Pipe Seals, Modifications to HACH Instrumentation Communications Protocol, MBR Module Lifting Safety Device, RO CIP-Skid Discharge Orifice Plate Addition	Design Changes, Owner Requested Changes	\$79,713.39
16	Pump station at the EQ Basin	Design Changes, Owner Requested Changes	NTE \$667,487.82
17	RW FUTURE PUMP STATION, Weather Time Extension, Valve Modifications, MBR Feed Pump Seal Water Control Changes	Design Changes, Owner Requested Changes, Unforeseen Conditions	NTE \$159,442.86

18	Construction Cost of UV System, Weather Time Extension	Design Changes, Unforeseen Conditions	NTE \$1,788,568.52
19	Aeration Basin 1-4 MOV Extension Risers, Aeration Basin Network Switch for HACH Instruments, Fine Screens, MBR Addition	Design and Scope Changes	\$95,556.60
20	Truck Scales	Design Change	NTE \$113,100.05
21	Line Connections on 4th Street, Effluent Analyzers and Sampler Additions, Yard Piping, Fine Screens Cleaning Pressure Washer, MBR RAS Pumps, Additions to Sludge Holding Tanks, Delay Decommissioning Existing Power, Weather Impact Dec 2020-April 2021	Design Change	NTE \$213,164.76
22	Existing Centrifuge Drain to Cooper Lift Station, IPS, Sludge Tank Blowers, MBR Chemical Skid Discharge Vent System, UV Network Switch for Carlos Connection	System Improvements	NTE \$28,006.52
23	MBR Replacement	System Improvements	NTE \$5,143,400.00
<b>WWTP Contingency</b>	<b>Budget Amount</b>	<b>Change Orders 1-23</b>	<b>Remaining</b>
	<b>\$11,624,252.52</b>	<b>\$9,944,158.43</b>	<b>\$1,680,094.09</b>

**Fiscal Impact:**Wastewater Treatment Plant Expansion/Renovation:

The project accounting below represents the status of funds should the change order be approved by City Council.

<b>WWTP</b>	<b>Budget Amount</b>	<b>Paid to Date</b>	<b>Remaining</b>
Design	\$2,697,942.63	\$2,557,938.51	\$140,004.12
Construction Management	\$6,034,572.75	\$5,800,350.58	\$234,222.17
Equipment	\$252,906.00	\$256,216.13	\$(3,310.13)
Permits	\$324,776.76	\$121,450.10	\$203,326.66
Construction	\$53,910,737.00	\$50,771,328.73	\$3,139,408.27
Contingency	\$11,624,252.52	\$4,053,316.54	\$7,570,935.98
Unallocated	\$1,489,244.72	\$ -	\$1,489,244.72
<b>Total</b>	<b>\$76,334,432.38</b>	<b>\$63,560,600.59</b>	<b>\$12,773,831.79</b>

**Recommended Action:**

Approve a resolution authorizing the execution of Change Order No. 23 with W.M. Lyles, Co. to install a new membrane system in the Wastewater Treatment Plant for the Wastewater Treatment Plant Upgrade/Expansion in the amount not to exceed \$5,143,400 for the replacement MBR system.

**Attachments:**

- A. Resolution Authorizing the Execution of Change Order No. 23
- B. W.M. Lyles Change Order Proposal