City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project
Change Order No. 21

September 08, 2021

			Amount	Calendar Days	Comp. Date
Contractor:	W.M. Lyles Co.	**Original Contract:**	$ 53,312,000.00	820	1/26/2021
Project Name:	Wastewater Treatment Plant Salt Mitigation Upgrade Project	**Previous Approved Changes:**	$4,480,315.86	186	5/30/2021
Contract No.:	C18-80	**This Change: Amount NTE**	**$213,164.76**	**55**	
CO Number:	21	**Revised Contract if Approved:**	$57,905,415.91	1061	**9/24/2021**
		Previous Phase 1 Completion Date			5/20/2020
		Revised Phase 1 Completion Date			9/18/2020

This change order covers changes to the subject contract as described herein. The Contractor shall supply all labor, equipment, and materials to complete the Change Order items for the lump sum price agreed upon herein. All Change Order items must be submitted to the City for approval prior to fabrication.

Item No.	PCO No.	Description of Changes	Amount	Phase 1 Time Extension (CD*)	Phase 2 / Project Completion Time Extension (CD*)
1	49	BCVWD Requested Changes to Line Connections on 4th Street	$15,597.01	0	0
2	50	Plant Effluent Analyzers and Sampler Additions	$48,501.92	0	0
3	51	Yard Piping – 3in Non-Potable Waterline & Valves	$17,500.62	0	0
4	53	Fine Screens Cleaning Pressure Washer – Piping & Electrical Additions	$82,276.27	0	0
5	55	MBR RAS Pumps – Seal Water Backup System	$11,721.54	0	0
6	57	8” WAS Additional Piping, Valves & Influent Mods to Sludge Holding Tanks	$37,567.40	0	0
7	59	TIA-07 SCE Delay Decommissioning Existing Power	$0	0	32
8	60	TIA-08 Inclement Weather Impact Dec-2020 thru Apr-2021	$0	0	23
		NET CHANGE IN CONTRACT AMOUNT – INCREASE	$213,164.76	0	55

*Calendar Days

The amount of the Contract will be increased/~~decreased~~ by Two Hundred-Thirteen Thousand, One Hundred Sixty-Four dollars and seventy-six cents ($213,164.76). The Contract Time will be increased by zero (55) calendar days.

The Contractor agrees to furnish all labor, equipment, and materials and to perform all other necessary work, inclusive of the directly or indirectly related work, within the approved time extension required to complete the above Change Order items. The undersigned Contractor approves the foregoing Change Order as to the changes, if any, in the Contract Price specified for each item including any and all supervision costs and other miscellaneous costs relating to the change in Work, and as to the extension of time allowed, if any, for the completion of the entire Work on account of said Change Order. The City and the Contractor hereby agree that this Change Order constitutes full mutual accord and satisfaction for all time, all costs, and all impacts related directly or indirectly to this Change Order. The Contractor hereby agrees that this Change Order represents the full equitable adjustment owed under the Contract, and further agrees on behalf of himself and all subcontractors to waive all right to file any further claims or request for equitable adjustment arising out of or as a result of this Change Order or the cumulative effect of this Change Order on the performance of the overall Work under the Contract. This document will become a supplement of the contract and all provisions will apply hereto. It is understood that the Change Order shall be effective when approved by the City.

Recommended: _____, *Date*: _____
MWH Constructors, Senior Resident Engineer

Accepted: _____, *Date*: _____
W.M. Lyles Co., Contractor

Approved: Brian P. Knoll _____, *Date*: 9/28/2021
Digitally signed by Brian P. Knoll
DN: C=US, E=brian.knoll@webbassociates.com, O=Albert A. Webb Associates, OU=Vice President, CN=Brian P. Knoll
Date: 2021.09.28 22:59:38-07'00'
Albert A. Webb Associates, Program Manager

Approved: _____, *Date*: _____
City of Beaumont, City Manager

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-49	
Design Adjustment: WML COP-055 R2 CLAR-26	BCVWD Requested Changes to 8" Potable Water Line

Reason for Design Changes:

After approval of previous Change Order 09, PCO-20, and further review of the final design drawings BCVWD requested additional modifications to the connection tie-ins on the existing 16-inch potable waterline and 24-inch reuse waterline located under 4th Street.

Design and Scope Changes:

These changes are shown on the attached drawing and are summarized as follows:

- There will be no hot tap of the potable water line by the contractor per pre-bid Addendum No.1. Instead, BCVWD will coordinate and perform all street work on the 16" water main and install a 16"x16"x8" Tee with two 16" butterfly valves on either side of the tee and an 8" gate valve on the new line into the project site.
- The recycled water line will terminate short of the road and will not be required to be connected to the existing 24" Recycled Waterline.
- Gate valves shall be Mueller A2361 series or equal, suitable for buried service and shall meet the requirements of Section 400561 and other related sections.
- A temporary 2-inch HDPE potable waterline with isolation valves and fittings shall be installed north of the Brine Meter Vault connecting the 4-inch potable waterline to the existing potable water meter during Phase 1 work.

Cost Impact:

WML's first quote for the work as requested in the Clarification was in the amount for a contract cost increase of $57,248.37, which included a larger and additional paving repair area. WML's second quote for a cost increase of $21,971.90 was revised after MWH review and adjustments to $15,597.01.

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of **$15,597.01** to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 055.02
(By Contractor)

To (Engineer/CM): MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com	**From (Contractor)**: W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com
PCO/DCM No.: CLAR-26	
Subject: BCVWD Requested Changes to 8" Potable Water Line	
Reference Documents: Attached	

DESCRIPTION

This COP is to modify the Potable Water and Recycled Water tie-in locations as noted on CLAR 26. It also assumes that the City of Beaumont will renew the attached Encroachment Permit at no additional cost.

COST ESTIMATE

Total Cost: $ 15,597.01. – see attached breakdown.

SCHEDULE IMPACT

N/A

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Oscar Mendoza, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

6/15/2021

Reference #: DCM #20

Attention: Charles W. Reynolds

City of Beaumont WWTP Salt Mitigation Upgrade Project

DESCRIPTION: CLAR-26 BCVWD Requested Changes to 8" PW Line

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	CLAR-26 BCVWD Requested Changes to 8" PW Li	1	LS	71	$ 6,141.59	$ 1,297.90	$ 1,788.84	$ 4,600.00	$ 13,828.34
2		1	LS	0	$ -	$ -	$ -	$ -	$ -
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				71	$ 6,141.59	$ 1,297.90	$ 1,788.84	$ 4,600.00	$ 13,828.34

Subtotal		$	13,828.34
Mark-up - Labor	15%	$	921.24
Mark-up - Equipment	15%	$	194.69
Mark-up - Materials	15%	$	268.33
Mark-up - Subcontractor	5%	$	230.00
Bond	1.0%	$	154.43
Total This Change Order		**$**	**15,597.01**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

CLAR-26 BCVWD Requested Changes to 8" PW Line ###

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
T&M Ticket 5/8/20	2			3			6														
T&M Ticket 5/11/20	4			8			14														
T&M Ticket 5/12/20	2			2			2														
T&M Ticket 5/14/20	2			5																	
T&M Ticket 6/2/20	2			5																	
T&M Ticket 6/3/20	2			6			6														
	14	0	0	29	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Rate			Hours			
Name	ST	PT	DT	ST	PT	DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	14	0	0	$1,124.81
Lab Pipe	$77.73	$103.27	$128.79	29	0	0	$2,254.11
Operator	$98.67	$131.84	$165.00	28	0	0	$2,762.67
Carp FM	$87.32	$117.91	$148.48	0	0	0	$0.00
Carp	$83.44	$112.07	$140.71	0	0	0	$0.00
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00
				71	0	0	
				Total Labor =			**$6,141.59**

B. Equipment

Description	17.230.	32.037	31.028	20.037	18.305	30.048	20.024
T&M Ticket 5/8/20	2			3	1		
T&M Ticket 5/11/20	4			8	1		
T&M Ticket 5/12/20	2					2	
T&M Ticket 5/14/20	2				1		
T&M Ticket 6/2/20	2				2		
T&M Ticket 6/3/20	2			6	1		
	14	0	0	17	5	2	0

Number	Description	Rate	Hours	Extension
17.230.	1/2 Ton PickupChevy1500 Crew Cab	$29.60	14	$414.40
32.037	ReachliftXtremeXR1055	$58.61	0	$0.00
31.028	Hydro Crane - 80 TonLink BeltRTC-8080 II 80 Ton	$164.01	0	$0.00
20.037	Mini ExcavatorTakeuchiTB260	$35.70	17	$606.90
18.305	1 Ton Gang TruckFordF350 Ext Cab	$29.60	5	$148.00
30.048	Loader Backhoe 410John Deere410L	$64.30	2	$128.60
20.024	ExcavatorCAT330D	$161.78	0	$0.00
Rent	Owner Op dump trucks	$100.00	0	$0.00
			38	
		Total Equipment =		**$1,297.90**

C. Materials

	Quantity	Unit	Price	Extension
Backflow Preventer Certification	2	ea	$ 100.00	$200.00
4" Gate Valve	1	ea	$ 636.00	$636.00
4" BNG	1	ea	$ 39.35	$39.35
2" HDPE Pipe	65	ft	$ 1.15	$74.75
2" GSP Tee	1	ea	$ 33.86	$33.86
2" GSP Pipe - 3ft	1	ea	$ 111.46	$111.46
2" Brass Valve	1	ea	$ 68.76	$68.76
Fill Sand	15	TN	$ 16.50	$247.50
Consumables	71	Hr	$ 3.50	$248.50
Tax	7.750%			$128.66
			Subtotal	$1,788.84
			Total Material =	**$1,788.84**

D. Subcontractor

	Quantity	Unit	Price	Extension
Traffic Control	1	LS	$4,600.00	$4,600.00
			Total Subcontract =	**$4,600.00**

MATICH CORPORATION
SINCE 1918
PO Box 10, Highland, CA 92346

To: Estimating
W.M. Lyles Co.
1210 W. Olive Ave.
Fresno CA 93728

Quote : 1394
Date : 4/29/2021
Phone: (559) 441-1900
Email: acayama@wmlylesco.com

From: Jason Jones
Phone: (909) 382-7400
Fax: (909) 382-0113

CA License: 149783 A, B
DIR No: 1000004260
Email: jjones@matichcorp.com

We propose to furnish labor and material in accordance with the plans and specifications for:

SALT WWTP - 4TH ST AC GRIND & OVERLAY
BEAUMONT, CA

Item No.		Description	Quantity	U/M	Unit Price	Total Price
4TH ST. GIND & OVERLAY						
01	1	TRAFFIC CONTROL	1.0	LS	$4,600.000	$4,600.00
01	2	.2' AC GRIND & OVERLAY	4,320.0	SF	$7.700	$33,264.00
		Total for: 4TH ST. GIND & OVERLAY				$37,864.00
		Total Proposal Price:				$37,864.00

NOTES

1. Proposal is good for 30 days.
2. If this work is not performed by June 30, 2021, this proposal is subject to a price adjustment.
3. Payment will be the 10th of the month following the work.
4. Matich Corporation not responsible for damage to unmarked underground utilities.
5. Proposal is based on unit prices.
6. Quantities are estimated; payment will be by field measured quantities at a minimum of 4,320 SF.
7. Includes ONE move-in and ONE shift; additional move-ins are $17,500/EA.
8. If work is to be completed on a seperate move-in new unit pricing will need to be negotiated.
9. Prices subject to labor rates, natural gas and OIL INDEX fluctuations.
10. Additional work unforseen work not specically included in this quote will be done at a negotiated price or on a time and material basis.

SPECIAL EXCLUSIONS

1. Excludes engineering, staking, testing, permits, and inspection fees.
2. Excludes hazardous material removal / disposal.
3. Excludes asphalt sawing and sealing.
4. Excludes import or export of fill material.
5. Excludes aggregate base materials.
6. Excludes adjustment of manholes, water valves and any utilities.
7. Excludes weedkill and crack fill.
8. Excludes the cost of bonds; add 0.7% if desired.
9. Excludes SWPPP requirements and dust control.

Date: **Accepted by:**

FERGUSON WATERWORKS #1088
1502 COLUMBIA AVE
RIVERSIDE, CA 92507-2014

Phone: 951-674-1323
Fax: 951-674-1084

Deliver To:
From: John Jacoste
Comments:

21:43:50 FEB 09 2021

FERGUSON WATERWORKS #1083
Price Quotation
Phone: 951-674-1323
Fax: 951-674-1084

Bid No: B389935
Bid Date: 01/28/21
Quoted By: XJJ

Cust Phone: 559-487-7926
Terms: NET 10TH PROX

Customer:
WM LYLES CO
551173-BEAUMONT WW TRTMT
PO BOX 4377
FRESNO, CA 93744

Ship To:
WM LYLES CO
715 W 4TH ST
BEAUMONT, CA 92223

Cust PO#: CHANGE ORDER

Job Name: 55.1173-BEAUMONT WW TRTMT

Item	Description	Quantity	Net Price	UM	Total
CF6102UOL	6 FLG RW NRS OL GATE VLV	6	799.090	EA	4794.54
CF6102POL	4 FLG RW NRS OL GATE VLV	2	636.000	EA	1272.00
CF6102MOL	3 FLG RW NRS OL GATE VLV	5	523.150	EA	2615.75
DCFM	DOM 3 DI C110 THRD COMP FLG F/ STL	10	47.280	EA	472.80
FNWNBSS61M	3 316 SS 150# FLG NUT/BLT SET	10	16.040	EA	160.40
FNWNA1FFGAM	3 NA 1/8 150# FF GSKT	10	9.980	EA	99.80
JE1905K	LF 2 FIP X FIP BALL CURB ST W/HDL	3	402.310	EA	1206.93
JJ2816K	*NP 2 SQ NUT	3	11.290	EA	33.87
DVBABS36	36 SLIP VLV BX BOT SECT DOM	16	117.720	EA	1883.52
DVBATS16	16 SLIP VLV BX TOP SECT DOM	16	102.030	EA	1632.48
DVBLIDW	TYLER VLV BX LID WTR DOM	16	21.290	EA	340.64
BNM24	3X24 BLK RDY CUT PIPE TBE	10	118.060	EA	1180.60
BNK24	2X24 BLK RDY CUT PIPE TBE	6	46.380	EA	278.28
FNWNBSS61U	6 316 SS 150# FLG NUT/BLT SET	12	49.590	EA	595.08
N150FFG18U	6 NA 1/8 FF 150# GSKT	12	11.980	EA	143.76
FNWNBSS61P	4 316 SS 150# FLG NUT/BLT SET	4	31.150	EA	124.60
N150FFG18P	4 NA 1/8 FF 150# GSKT	4	8.200	EA	32.80

Net Total:	$16867.85
Tax:	$1307.26
Freight:	$0.00
Total:	$18175.11

Item Code	Description	Notice
FNWNBSS61M	3 316 SS 150# FLG NUT/BLT SET	⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov
FNWNBSS61U	6 316 SS 150# FLG NUT/BLT SET	⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov
FNWNBSS61P	4 316 SS 150# FLG NUT/BLT SET	⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

HOW ARE WE DOING? WE WANT YOUR FEEDBACK!
Scan the QR code or use the link below to
complete a survey about your bids:
https://survey.medallia.com/?bidsorder&fc=1083&on=25463

CORE & MAIN

INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice #	K218988
Invoice Date	10/23/19
Account #	242591
Sales Rep	JESSE HAVARD
Phone #	909-574-8662
Branch # 168	Corona, CA
Total Amount Due	$33,373.87

Remit To:
CORE & MAIN LP
PO BOX 28330
ST. LOUIS, MO 63146

W. M. LYLES CO.
PO BOX 4377
FRESNO CA 93744-4377

Shipped to:
715 W 4th STREET
CITY OF BEAUMONT, CA

CUSTOMER JOB- 55.1173 WTP SALTMITIGAT

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered	Date Shipped	Customer PO #	Job Name	Job #	Bill of Lading	Shipped Via	Invoice #
3/03/19	10/22/19	55.1173-4016	WTP SALTMITIGAT	55.1173		CORE & MAIN LP	K218988

Product Code	Description	Quantity Ordered	Quantity Shipped	B/O	Price	UM	Extended Price
0910M041190	4 IPS DR11 HDPE 90 BEND MOLD	2	2		10.90000	EA	21.80
0910M0411T	4 IPS DR11 HDPE TEE MOLD	4	4		16.20000	EA	64.80
0910M040211R	4X2 IPS DR11 HDPE RED MOLD	4	4		7.80000	EA	31.20
0941M040311R	4X3 4100 SDR11 IPS PE RED	2	2		7.75000	EA	15.50
0941P061140	6 IPS DR11 HDPE PIPE 40'	1000	1000		7.49000	FT	7,490.00
0910M061145	6 IPS DR11 HDPE 45 BEND MOLD	7	7		30.30000	EA	212.10
0910M0611T	6 IPS DR11 HDPE TEE MOLD	3	3		39.30000	EA	117.90
0941F060211R	6X2 SDR11 IPS HDPE CONC REDUC-ER	1		1	38.35000	EA	.00
0910M060311T	6X3 SDR11 IPS HDPE TEE MOLDED	1	1		70.80000	EA	70.80
0910P021120	2 IPS DR11 HDPE PIPE 20'	1340	1340		1.13000	FT	1,514.20
0941F060311R	6X3 SDR11 IPS HDPE REDUCER	3	3		42.68000	EA	128.04
0910M060411T	6X4 SDR11 IPS HDPE TEE MOLDED	1	1		118.80000	EA	118.80
0910M060211T	6X2 SDR11 IPS HDPE TEE MOLDED	2	2		117.16000	EA	234.32
0910M0611FA	6 IPS DR11 HDPE FLG ADPT	1	1		25.20000	EA	25.20
0941BUR0611316SS	6 SDR11 316SS IPS BACKING RING	1	1		578.00000	EA	578.00
0910M040311T	4X3 SDR11 IPS HDPE TEE MOLDED	5	5		47.52000	EA	237.60
0910M040211T	4X2 SDR11 IPS HDPE TEE MOLDED	1	1		47.52000	EA	47.52
0910M0411FA	4 IPS DR11 HDPE FLG ADPT	5	5		14.73000	EA	73.65

CONTINUED

McMASTER-CARR®

Delivers tomorrow 9-11 am

1	**Brass On/Off Valve** with Lever Handle, 2 NPT Female 47865K28 Your reference:	1 Each	$68.76 Each	$68.76
2	**Low-Pressure Pipe Fitting** Galvanized Iron Tee Connector, 2 NPT Female 4638K128 Your reference:	1 Each	33.86 Each	33.86
3	**Standard-Wall Galvanized Steel Pipe** Threaded on Both Ends, 2 NPT, 36" Long 4499K82 Your reference:	1 Each	111.46 Each	111.46

Merchandise	214.08
Shipping	17.15
Tax	16.59
Total	**$247.82**

Contact
Contact

Delivery method
Ground
Tomorrow by 11 am

Delivery address
W. M. Lyles Co
715 west 4th St
Beaumont CA 92223

Delivery attention:
Armando Cayama

Payment method
Invoice

Invoice / receipt preference
PO BOX 28130
acayama@wmlylesco.com

Billing address
W. M. Lyles Co
PO BOX 28130
Fresno CA 93729

Tax
Taxable

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance®

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code 99010 0220 Date 5/8/20

DESCRIPTION OF WORK

POT HOLE EXCAVATE AND INSTALL 2" HDPE AT EXISTING WATER METER ON FORTH STREET

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO VELASQUEZ	FM	2			
ANTONIO RAMIREZ	LAB	3			
GARY HINER	OPER.	3			
DANIEL SCHROEDER	AP. OPER.	3			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.230		2	
TAKEUCHI MINI EX	20.037		3	
DOB TRUCK	15.182		1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of Resources ONLY

CUSTOMER
Signature [signature] 5/8/20
Print Name
Title Date

W.M. Lyles Co.
Signature [signature]
Print Name ROBERT BECK
Title SUPER. Date

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code 99010 0220 Date 5/11/20

DESCRIPTION OF WORK

POT HOLE EXCAVATE AND INSTALL 2" HDPE AT EXISTING WATER METER ON FORTH STREET

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO VELASQUEZ	FM	4			
ANTONIO RAMIREZ	LAB	8			
GARY HINER	OPER.	8			
DANIEL SCHROEDER	AP. OPER	6			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.230	4		
TAKEUCHI MINI EX	20.037	8		
JOB TRUCK	15.182	1		

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of Resources only.

CUSTOMER
Signature Chris Beck 5/11/20
Print Name
Title Date

W.M. Lyles Co.
Signature
Print Name ROBERT BECK
Title SUPER. Date

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance®

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code 99010 0220 Date 5/12/20

DESCRIPTION OF WORK

POT HOLE EXCAVATE AND INSTALL 2" HDPE AT EXISTING WATER METER ON FORTH STREET

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO VELASQUEZ	FM	2			
ANTONIO RAMIREZ	LAB	2			
RICHARD GROSSER	OPER.	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.230	2		
J.D. BACKHOE 410	30.051	2		

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of resources only

CUSTOMER
Signature [signature] 5/12/20
Print Name
Title Date

W.M. Lyles Co.
Signature [signature]
Print Name ROBERT BECK
Title SUPER Date

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code Date 5/14/20

DESCRIPTION OF WORK

INSTALL 2" HDPE AND VALVES TO METER AT FORTH STREET

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO VELASQUEZ	FM	2			
JOSE MENDOZA RODRIGUEZ	LAD	5			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.230		2	
JOB TRUCK	15.182		1	

MATERIAL

DESCRIPTION	QTY	UM
2" BRASS JONES VALVES	2	
4" GATE VALVE	1	
2" HDPG PIPE	65 FT.	

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of Resources ONLY

CUSTOMER
Signature C. Buck
Print Name C. Buck
Title MWHC Date 5/14/20

W.M. Lyles Co.
Signature
Print Name ROBERT BECK
Title SUPER. Date 5/14/20

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1955
Progress Through Performance

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code 99.010.0220 Date 6/2/20

DESCRIPTION OF WORK

TIE-IN 2" POTABLE WATER TO CITY METER AT 4th STREET

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
MARTIN BARRERA	FORE.	2			
GIOVANNI PARAGUIRRE	LAB	3			
EDDIE GOMEZ	LAB	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.215		2	
JOB TRUCK	18.197		2	

MATERIAL

DESCRIPTION	QTY	UM
2" GSP	3	
2" GSP TEE	1	
2" BRASS VALVE	1	

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of Resources ONLY

CUSTOMER
Signature [signature]
Print Name MWHC
Title _____ Date 6-2-20

W.M. Lyles Co.
Signature [signature]
Print Name ROBERT BELK
Title SUPER. Date 6/2/20

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1945
Progress Through Performance

Project Name SALT MITIGATION UPGRADE Project No. 55.1173
Phase Code 99.010.0220 Date 6/3/20

DESCRIPTION OF WORK

BACKFILL 2" POTABLE WATER AT 4th STREET
REBUILD DIRT BERM

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO VELAQUEZ	FORE.	2			
RICHARD GROSSER	OPER.	6			
JAIME PANTOJA	LAB	6			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FOREMAN TRUCK	17.230		2	
JOB TRUCK	15.182		1	
TAKEUCHI MINI EX.	20.037		6	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Verification of Resources only

CUSTOMER
Signature [signature]
Print Name MWHC
Title _____ Date 6-3-20

W.M. Lyles Co.
Signature [signature]
Print Name ROBERT BECK
Title SUPER. Date 6/3/20

CITY OF BEAUMONT WASTE WATER TREATMENT PLANT
SALT MITIGATION UPGRADE PROJECT

CLARIFICATION 26

To (Construction Manager):	Stantec Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com
From (Engineer):	Webb Associates Attention: Shane Bloomfield Phone: 951-248-4293 Email: shane.bloomfield@webbassociates.com
Subject: Changes to Clarification 15	**Location:** Yard
Reference Documents: C-26	

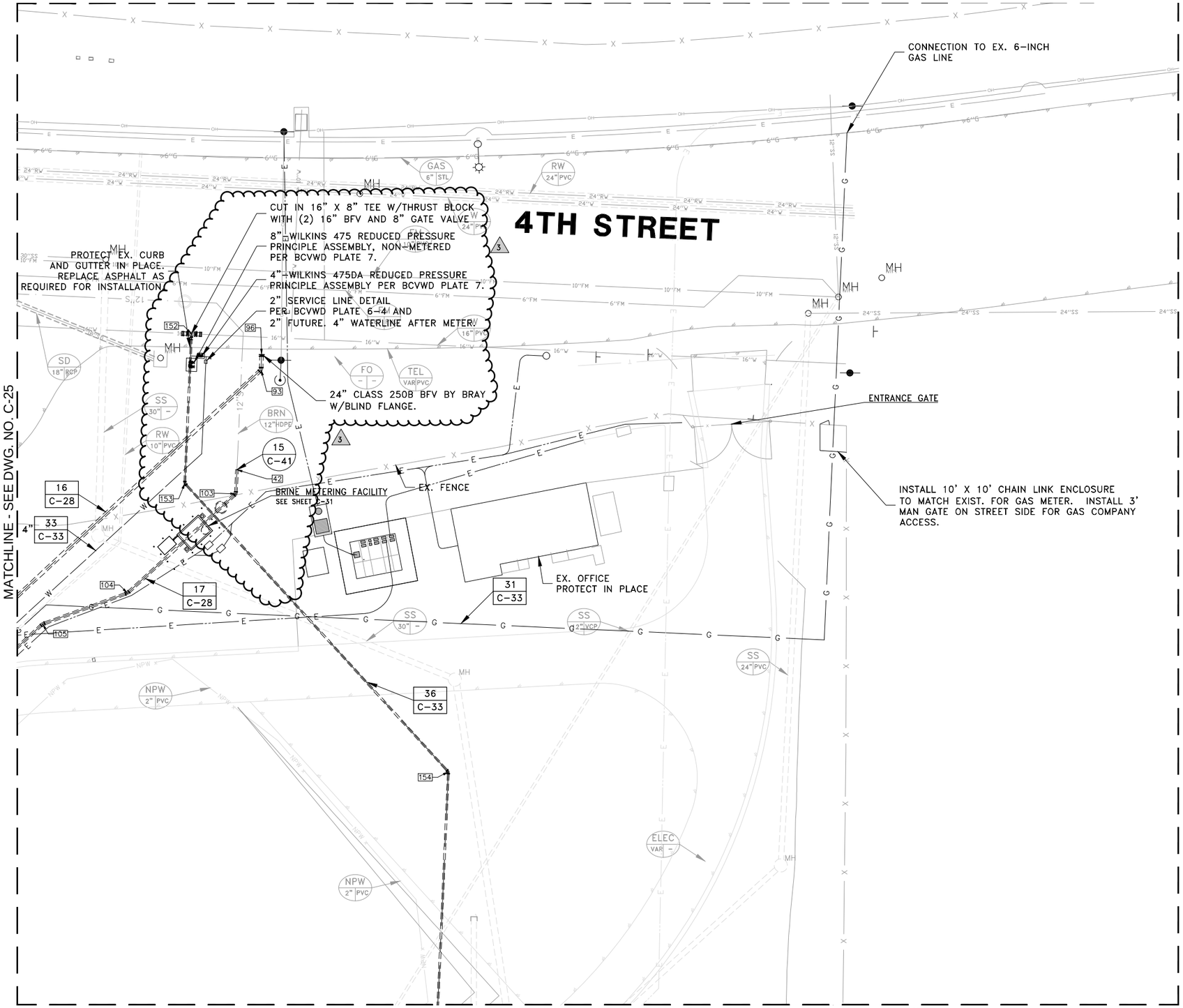
CLARIFICATION

Note the following:

The BCVWD has requested changes to the connection points of the water line and recycled water line. These changes are shown on the attached drawing and are summarized as follows:

1. No hot tap of the potable water line. Instead, the Contractor will be required to coordinate with BCVWD for a shutdown of the 16" water main and install a 16"x8" tee with two 16" butterfly valves on either side of the tee and an 8" gate valve on the new line into the project site. This water line is also routed farther west than previously shown.
2. The recycled water line will terminate short of the road and will not be required to be connected to the 24" recycled water main. This line will have a dead end butterfly valve where the line terminates.
3. The butterfly valves shall be Bray Series 31 or equal, suitable for buried service and shall meet the requirements of Section 400564 and other related sections.
4. Gate valves shall be Mueller A2361 series or equal, suitable for buried service and shall meet the requirements of Section 400561 and other related sections.

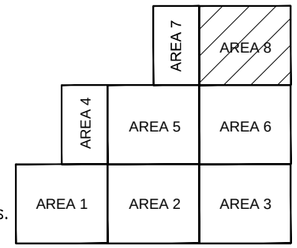
Prepared By (Name): Shane Bloomfield, Webb Associates	**Date**: 12/3/19
Distributed By:	**Date**:

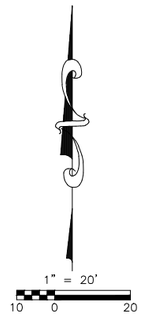


COORDINATE TABLE					
Point No.	N	E	Inv. Elev.	Fitting	Size
42	2281350.02	6336885.69	2537.45	COUPLING	12"
93	2281387.78	6336894.83	2540.44	45° BEND	16"
96	2281393.67	6336895.05	2540.44	BFV	16"
103	2281340.89	6336885.27	2537.49	45° BEND	12"
104	2281303.29	6336844.24	2537.60	22.5° BEND	12"
105	2281291.61	6336812.16	2537.67	22.5° BEND	12"
152	2281401.40	6336868.52	2544.00	TEE	16"
153	2281344.82	6336865.97	2542.00	45° BEND	8"
154	2281255.67	6336965.70	2540.30	45° BEND	8"

NOTES:

1. SEE SHEET C-33 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO FIELD VERIFY CROSSINGS AND CONNECTION POINTS.





0 1/2 1

DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

ORIGINAL			
NO.	DATE	DESIGN	DRAWN	CHECKED
C	9/5/18	SLB	SLB	BPK
REVISIONS				
1	2/22/19	SLB	SLB	BKP
2	7/26/19	SLB	SLB	BPK
3	12/2/19	SLB	SLB	BPK

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
CIVIL
AREA 8 YARD PIPING PLAN

AQUA ENGINEERING
533 W. 2600 S. SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256
ENGINEERING CONSULTANTS

SHEET
C-26

G:\2017\17-0177\Drawings\Plan Sheets\17-0177-C-YP 11-18-19.dwg

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-50	
Design Adjustment: WML COP-049 R1 CLAR-39	Plant Effluent Analyzers and Sampler Additions

Reason for Design Changes:

Required to monitor and record the plant effluent water quality new updated instrumentation along with a new sampler is needed. Also required is modifications to the existing sampling control panel, various electrical changes and pump and piping changes.

Design and Scope Changes:

- The contractor shall remove and replace the existing sampling pump and make electrical changes to provide power to a new submersible pump as required in the Clarification attached.
- The fiber to copper media converter will need to be replaced by an unmanaged Ethernet switch with a fiber uplink, to connect to both the new SC4200 and the SC4200 previously installed. Power will also need to be extended to the new SC4200 transmitter and 4-20mA signals from the transmitter to RIO-HW will be sent via the two spare twisted shielded cables.
- Mechanical changes shall include modifications inside the existing panel new piping to the pump station wet-well with stilling well.
- Provide a new control panel to install the new HACH turbidity analyzer with power and enclosure heater.

Cost Impact:

WML's first quote for the work as requested in the Clarification was in the amount for a contract cost increase of $83,143.04. MWH recommended changes to the clarification and work be performed under T&M conditions. WML completed the work and submitted a revised quote in the amount of $48,501.92.

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of $48,501.92 to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 049.1
(By Contractor)

To (Engineer/CM):	**From (Contractor)**:
MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com	W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com

PCO/DCM No.: CLAR-39, DCM-33

Subject: Effluent Sampling and Instrumentation

Reference Documents: Drawing Nos. RWM-1, RWM-4

DESCRIPTION

This COP is for the installation of a new ISCO sampler, Goulds pump, Analyzer Instrument Panel and instrumentation per CLAR 39.

COST ESTIMATE

Total Cost $48,501.92. – see attached breakdown

SCHEDULE IMPACT

None

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Juan C. Ahumada, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

Reference #: CLAR-39, DCM-33

Attention: Charles W. Reynolds

City of Beaumont WWTP Salt Mitigation Upgrade Project

DESCRIPTION: Effluent Sampling and Instrumentation

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	Effluent Sampling and Instrumentation	1	LS	52	$ 4,252.00	$ 730.80	$ 17,237.00	$ 21,398.98	$ 43,618.78
2		1	LS	0	$ -	$ -	$ -	$ -	$ -
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				52	$ 4,252.00	$ 730.80	$ 17,237.00	$ 21,398.98	$ 43,618.78

Subtotal		$	43,618.78
Mark-up - Labor	15%	$	637.80
Mark-up - Equipment	15%	$	109.62
Mark-up - Materials	15%	$	2,585.55
Mark-up - Subcontractor	5%	$	1,069.95
Bond	1.0%	$	480.22
Total This Change Order		**$**	**48,501.92**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

Effluent Sampling and Instrumentation

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
Grade, Form, Rebar, Pour, Strip Concrete pad							4			8			8			8			4		
Remove Existing Pump and Piping	4			4																	
T&M 5/21/21	4			8																	
	8	0	0	12	0	0	4	0	0	8	0	0	8	0	0	8	0	0	4	0	0

Name	Rate ST	PT	DT	Hours ST	PT	DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	8	0	0	$642.75
Lab Pipe	$77.73	$103.27	$128.79	12	0	0	$932.73
Operator	$98.67	$131.84	$165.00	4	0	0	$394.67
Carp FM	$87.32	$117.91	$148.48	8	0	0	$698.56
Carp	$83.44	$112.07	$140.71	8	0	0	$667.52
Lab	$74.26	$98.07	$121.86	8	0	0	$594.09
Cement Mason	$80.42	$105.60	$130.78	4	0	0	$321.68
				52	0	0	
				Total Labor =			**$4,252.00**

B. Equipment

Description	17.12	18.31	31.028	30.048	20.041	35.064	Rent
Grade, Form, Rebar, Pour, Strip Concrete pad	8			4			
Remove Existing Pump and Piping	4						
T&M 5/21/21		4					
	12	4	0	4	0	0	0

Number	Description	Rate	Hours	Extension
17.12	Foreman Truck	$29.60	12	$355.20
8.000	1 Ton PickupFordF350 XL SRW Crew Cab	$29.60	4	$118.40
31.028	Hydro Crane - 80 TonLink BeltRTC-8080 II 80 Ton	$164.01	0	$0.00
30.048	Loader Backhoe 410John Deere410L	$64.30	4	$257.20
20.041	ExcavatorJohn Deere350GLC	$151.12	0	$0.00
35.064	LoaderJohn Deere644J	$123.00	0	$0.00
17	Foreman Truck	$29.60	0	$0.00
20.041	ExcavatorJohn Deere350GLC	$151.12	0	$0.00
35.064	LoaderJohn Deere644J	$123.00	0	$0.00
Rent	Owner Op dump trucks	$100.00	0	$0.00
			20	
		Total Equipment =		**$730.80**

C. Materials

	Quantity	Unit	Price	Extension
Teledyne ISCO, 5800 Refrigerated Sampler	1	ea	$ 7,386.00	$7,386.00
1/3HP, 115V Goulds Pump LSP0311	1	ea	$ 289.83	$289.83
8" x 10' Long PVC pipe	1	ea	$ 167.40	$167.40
8" Strut mount clamp support	3	ea	$ 12.59	$37.77
1"x10' Long 316SS pipe	1	ea	$ 234.51	$234.51
1" 90 deg 316SS elbow	4	ea	$ 14.81	$59.24
1" Tee 316SS	2	ea	$ 23.26	$46.52
1" Union 316SS	2	ea	$ 32.56	$65.12
1"Male x 1/2"Female bushing 316SS	3	ea	$ 8.75	$26.25
1 1/2"Male x 1"Female bushing 316SS	1	ea	$ 20.32	$20.32
1" nipples	5	ea	$ 10.75	$53.75
1/2" nipples	5	ea	$ 5.90	$29.50
Stacked SS strut channel - 10ft long	1	ea	$ 217.94	$217.94
3/8" SS wedge anchors	3	pk	$ 59.32	$177.96
Pressure Indicator	1	ea	$ 161.05	$161.05
24" Plug rental	10	mt	$ 655.86	$6,558.60
2" x 20' Sch 80 PVC pipe	1	ea	$ 65.89	$65.89
2" Strut mount clamp support	3	ea	$ 7.59	$22.77
Tax	7.750%			$1,210.58
			Subtotal	$16,831.00
			Freight	$406.00
			Total Material =	**$17,237.00**

D. Subcontractor

	Quantity	Unit	Price	Extension
Southern Contracting	1	LS	$21,398.98	$21,398.98
			Total Subcontract =	**$21,398.98**

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont - WWTP Solids Magazine Upgrade Project No. 55.1173
Phase Code 99.010.0370 Date 05/21/21

DESCRIPTION OF WORK

Installation of Sampler at RWPS.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Rick Pelliam	FM	4			
Rodney McWilliams	Lab	4			
James Buckley		4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18.310	1	4	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 5/24/21

W.M. Lyles Co. Signature Samantha Robbins
Print Name Samantha Robbins
Title FE Date 05/25/21

Oscar Mendoza

From: James.Bryan@Ferguson.com
Sent: Friday, March 26, 2021 1:28 PM
To: Oscar Mendoza
Cc: Samantha Robbins
Subject: RE: BLSP03-R1.pdf

We are on it sir.
Thank you for the order and have a great weekend.

James Bryan, Assoc. DBIA
Outside Sales
Waterworks Division | Treatment Plant Sales
Ferguson Waterworks | SoCal
C: 951-239-6379
FergusonWaterworks.com [fergusonwaterworks.com]
2020 Waterworks Counter Catalog [ferguson.dirxion.com]

Pollardwater

From: Oscar Mendoza <omendoza@wmlylesco.com>
Sent: Friday, March 26, 2021 1:22 PM
To: James Bryan <James.Bryan@Ferguson.com>
Cc: Samantha Robbins <SRobbins@wmlylesco.com>
Subject: RE: BLSP03-R1.pdf

James,

I would like to order one pump. PO # 55.1173. thanks,

Oscar Mendoza | Project Manager
W. M. LYLES CO. | Southern Division
42142 Roick Dr. | Temecula, CA 92590
O 951-973-7393 | C 619-565-6064
www.wmlyles.com

From: James.Bryan@Ferguson.com <James.Bryan@Ferguson.com>
Sent: Tuesday, December 22, 2020 8:22 AM
To: Oscar Mendoza <omendoza@wmlylesco.com>
Subject: RE: BLSP03-R1.pdf

Oscar,

I deeply apologize for the delay on this one.
Please see pricing below:

$289.83 each plus tax and freight from New York.

They show this is in stock as of today.
Please respond with any questions.
Thank you for your time.

James Bryan, Assoc. DBIA
Outside Sales
Waterworks Division | Treatment Plant Sales
Ferguson Waterworks | SoCal
C: 951-239-6379
FergusonWaterworks.com [fergusonwaterworks.com]
2020 Waterworks Counter Catalog [ferguson.dirxion.com]

Pollardwater

From: Oscar Mendoza <omendoza@wmlylesco.com>
Sent: Monday, December 7, 2020 9:19 AM
To: James Bryan <James.Bryan@Ferguson.com>
Subject: BLSP03-R1.pdf

James,

I need a quote and lead time for this pump. Thanks

Oscar Mendoza | Project Manager
W. M. LYLES CO. | Southern Division
42142 Roick Dr. | Temecula, CA 92590
O 951-973-7393 | C 619-565-6064
www.wmlyles.com

TELEDYNE INSTRUMENTS, INC.
Everywhereyoulook™
Federal ID: 95-4888283

Remit to:	12497 Collections Center Drive Chicago, IL 60693 ABA# 121-000-358 Acct# 12331-07806

Sold To:
WM Lyles
PO Box 4377
Fresno, CA 93744

Invoice

Bill To:
WM Lyles
PO Box 4377
Fresno, CA 93744

Ship To:
W. M. Lyles Co.
Oscar Mendoza O 951-973-7393 | C 619-565-6064
715 W 4th Street
BEAUMONT, CA 92223

Sales Order	Customer PO	Customer Reference	Payment Terms	Discount	Customer No	Invoice No
00522998	5511734061		Net 30		0009882	S020465446

Carrier	Tracking Number	Teledyne Contact Information		Invoice Date
UPS Ground	101580099	Smith, Anderson E.	800/228-4373	5/7/2021

Delivery Terms	Named Destination	Packing List	RMA Number
ORIG-S&HAd		00540258	

Line	Item Number	Description	Tax	U/M	Quantity	Unit Price	Amount
	685800001	SMPLR 5800 115V 5800 Refrigerated Sampler (115 VAC, 60 Hz). Includes control panel, refrigeration unit, distributor arm, two pump tubes, instruction manual, and pocket guide. To receive a complete system you must also order a bottle configuration kit and suction line with strainer. ***Includes 2 year limited warranty***		ea	1	6,272.00	6,272.00
	Serial Number(s):	605800005: 221E00157					
	685800015	BTL KIT 24-1L PLST 24-bottle Configuration. Includes 24 polypropylene 1-liter wedge shaped bottles with caps, bottle rack and two discharge tubes.		ea	1	418.00	418.00
	609004379	S/L W/STR 3/8X25 S 3/8 inch ID x 25 ft. long vinyl suction line with standard weighted polypropylene strainer. Includes tubing coupler.		ea	1	126.00	126.00

Continued Next Page

TELEDYNE INSTRUMENTS, INC.
Everywhereyoulook™
Federal ID: 95-4888283

Remit to: 12497 Collections Center Drive
Chicago, IL 60693
ABA# 121-000-358
Acct# 12331-07806

Sold To:
WM Lyles
PO Box 4377
Fresno, CA 93744

Invoice

Bill To:
WM Lyles
PO Box 4377
Fresno, CA 93744

Ship To:
W. M. Lyles Co.
Oscar Mendoza O 951-973-7393 | C 619-565-6064
715 W 4th Street
BEAUMONT, CA 92223

Sales Order	Customer PO	Customer Reference	Payment Terms	Discount	Customer No	Invoice No
00522998	5511734061		Net 30		0009882	S020465446

Carrier	Tracking Number	Teledyne Contact Information		Invoice Date
UPS Ground	101580099	Smith, Anderson E.	800/228-4373	5/7/2021

Delivery Terms	Named Destination	Packing List
ORIG-S&HAd		00540258

Line	Item Number	Description	Tax	U/M	Quantity	Unit Price	Amount
	685800020	5800 CABLE WITH FLY LEADS 5800 refrigerated sampler multipurpose cable with 16 unterminated leads, 10 ft. (3 m). Includes instruction sheet.		ea	1	115.00	115.00
					Shipping & Handling		406.00

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

Seller's acceptance of this Order is expressly conditioned upon the Buyer's assent to Seller's Terms and Conditions of Sale as stated in Seller's Offer and found at the applicable Teledyne company internet website listed below. Seller is proceeding with the performance of Buyer's Order strictly on this basis. Teledyne ISCO is an indirect subsidiary of Teledyne Technologies Incorporated. Teledyne Ethics Line 1-877-666-6968.

Invoice Amount 7,337.00 **USD**

STEMAR EQUIPMENT & SUPPLY CO., INC.

SERVING UNDERGROUND CONSTRUCTION SINCE 1922

RENTAL
SALES
SERVICE

353 S. CENTRAL AVENUE, LOS ANGELES, CALIFORNIA 90013
PHONE (213) 625-0185 | TOLL FREE (800) 992-0100 • (888) 4STEMAR | FAX (213) 625-0826

www.stemarinc.com

CUSTOMER	JOB LOCATION	***INVOICE***
LYLES, W.M. P.O. BOX 4377 FRESNO CA 93744	715 W 4TH ST. BEAUMONT CA 92223	INVOICE: CON# 43336 INVOICE DATE: 11/19/20 TERMS: NET 30 DAYS ***INVOICE***

ACCOUNT #	ORIGINAL TICKET #	SHIPPED VIA		DATE	TIME
112032	Org# 39745-RB5	STEMAR TRUCK	OUT	10/19/20	6:00 AM KBM
PO/JOB #	**ORDERED BY**				
1173	OSCAR		BILL THRU	11/16/20	6:00 AM KBM

RENEWAL INVOICE DEL:Y P/U:N

QTY	ITEM#	DESCRIPTION	MIN	DAY	WEEK	4 WEEK	EXT AMT	NET AMT
1	2236-0559	12"X24" C BLOCKING PLUG					315.00	315.00
	$105.00/W			15.00	105.00	315.00		
1	2732-0000	SFTYLINE 1/4>25 GAUGE					48.00	48.00
	$16.00/W			2.29	16.00	48.00		
1	2715-0000	LIFTING BRIDLES 2'					0.00	0.00
	.00/W			.00				
1	8412-0000	BREATHING REGULATOR					120.00	120.00
	$10.00/D			10.00	40.00	120.00		
1	8415-0000	CYLINDER 300CU FTFL					160.00	160.00
	$20.00/D			20.00	80.00	160.00		

Rental Note(s) : ***READ INCLUDED SAFETY INSTRUCTIONS***
CALL +1 (800) 992-0100 IMMEDIATELY IF NOT RECEIVED!!!

----- Payments ------

RECEIVED
NOV 23 2020
By

UNLESS OTHERWISE NOTED, YOUR TERMS ARE *NET 30 DAYS*

By signing this contract, I agree that all rental returns are subject to final inspection. Charges for damaged equipment may be billed on a separate invoice.

IF I DO NOT UNDERSTAND OR FORGET THE INSTRUCTIONS I HAVE BEEN GIVEN, OR IF THE EQUIPMENT FAILS I WILL NOT ATTEMPT TO OPERATE OR REPAIR IT. I WILL DISCONTINUE USE AND NOTIFY RENTAL CENTER IMMEDIATELY.

I have read, discussed and understand the terms and conditions of the Agreement and agree to be bound thereto.

SIGNING PERSONALLY AND FOR THE CUSTOMER:

X _____

Print Name: _____

THIS IS YOUR RENTAL AGREEMENT. READ BOTH SIDES BEFORE SIGNING.

RENT	643.00
SALES	0.00
OTHER	0.00
ENV FEES	12.86
Addl TAX	0.00
SALES TAX	0.00
DEPOSIT	0.00
TOTAL DUE	655.86
AMT BILLED	655.86

19-NOV-20 13:06:19

FERGUSON WATERWORKS #1088
1502 COLUMBIA AVE
RIVERSIDE, CA 92507-2014

Phone: 951-674-1323
Fax: 951-674-1084

Deliver To:
From: John Jacoste
Comments:

FERGUSON WATERWORKS #1083
Price Quotation
Phone: 951-674-1323
Fax: 951-674-1084

Bid No: B403020
Bid Date: 07/13/21
Quoted By: XJJ

Cust Phone: 559-487-7926
Terms: NET 10TH PROX

Customer:
WM LYLES CO
551173-BEAUMONT WW TRTMT
PO BOX 28130
FRESNO, CA 93729

Ship To:
WM LYLES CO
551173-BEAUMONT WW TRTMT
PO BOX 28130
FRESNO, CA 93729

Cust PO#:

Job Name: 55.1173-BEAUMONT WW TRTMT

Item	Description	Quantity	Net Price	UM	Total
DR14BPX	8 C900 DR14 PVC GJ BLUE PIPE	20	34.570	FT	691.40
DR18BPX	8 C900 DR18 PVC GJ BLUE PIPE	20	27.820	FT	556.40
P80BK	2 X 20 FT PVC S80 BE PIPE	20	329.450	C	65.89
GSP44LK	2 SS S40 304L A312 WELD PIPE	20	15.190	FT	303.80
GSP44LP	4 SS S40 304L A312 WELD PIPE	40	44.030	FT	1761.20

Net Total:	$3378.69
Tax:	$282.12
Freight:	$0.00
Total:	$3660.81

Item Code	Description	Notice
P80BK	2 X 20 FT PVC S80 BE PIPE	⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. QUOTES FOR PRODUCTS SHIPPED FOR RESALE ARE NOT FIRM UNLESS NOTED OTHERWISE.

CONTACT YOUR SALES REPRESENTATIVE IMMEDIATELY FOR ASSISTANCE WITH DBE/MBE/WBE/SMALL BUSINESS REQUIREMENTS.

Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at https://www.ferguson.com/content/website-info/terms-of-sale
Govt Buyers: All items are open market unless noted otherwise.

LEAD LAW WARNING: It is illegal to install products that are not "lead free" in accordance with US Federal or other applicable law in potable water systems anticipated for human consumption. Products with *NP in the description are NOT lead free and can only be installed in non-potable applications. Buyer is solely responsible for product selection.
WATER FLOW RATE NOTICE: Lavatory Faucets with flow rates over 0.5 GPM are not allowed for 'public use' in California.

Southern Contracting Company
P.O. Box 445 San Marcos, CA 92079-0445
Tel 760-744-0760 Fax 760-744-5475
website: www.southerncontracting.com
email: info@southerncontracting.com

Change Order Request

103801 — Wastewater Treatment Plant Salt Mitigation Upgrade

COR Subject: COR#027 CLAR-039 Effluent Sampler T&M

To
Juan C. Ahumada
W.M. Lyles
42142 Roick Drive
Temecula, CA 92590
951-973-7393

Return To
Dan Alcantar
Southern Contracting Company
760-744-0760x621
619-778-0681
DAlcantar@southerncontracting.com

Contract No:	**55.1173**
COR Number:	**103801-COR#027 Rev1**
COR Revision Number:	**0**
COR Date:	7/28/2021
Work Type:	Price / Do Not Proceed
Other Reference No:	CLAR-039
Days Valid:	**5**

Scope Of Work / Time Extension Request

The work associated with CLAR-039 Effluent Sampling is a change to Southern Contracting Company's scope of work in which a change in Contract Price and Time is to be considered. Accordingly, Southern Contracting Company requests a Contract Change Order in the amount of $21,398.98

Scope of Work is as follows:
- On a Time and Materials Basis we will Provide new instrumentation and effluent sampler as indicated by Charles Reynolds (see TSI materials Breakdown).
Southern Contracting provided support to wire the new equipment.

Exclusions: Installation of inline instrumentation, Set up of network and SCADA updates, programming, concrete, concrete pads, dry pack, digging, backfill, surface restoration, Overtime.

Change in time: 5 days

Southern Contracting reserves all rights to additional costs and time for changes not identified in the documents furnished, and is not responsible for additional costs or time for work which is not part of our contract scope of work, unless stipulated above. Should additional information or clarification be required, please contact me at your convenience.

Summary

Total: **$21,398.98**

Reservation of Rights

This COR does not include any amount for impacts such as interference, disruptions, rescheduling, changes in the sequence of work, delays and/or associated acceleration. We expressly reserve the right to submit our request for any of these items.

Signed By: 

Dated: 7/28/2021

Daniel Alcantar
PM

Bid Summary Report

Job Name: 103801 Beaumont Chang Orders

Contractor:

Estimator: Dan Alcantar

Notes:

Bid Date:

Summary Description	Material			Labor		
	Extended	%	Adjusted	Extended	%	Adjusted
COR#027 Rev1 CLAR-039 Effluent	$0.04	100.00%	$0.04	0.01	100.00%	0.01

Top Sheet

Raw Cost		$18,423.58	Sales per Month	$0.00
Tax		$0.00	Return per Month	$0.00
Raw Cost with Tax		$18,423.58	Price per Square Foot	$0.00
Overhead		$2,763.54	Hours per Square Foot	0.00
Profit		$0.00	Square Feet	0.00
Total Return Amount		$2,763.54	Job Months	0.00
Total Return %		12.91%	Hours per Week	0.00
Price		$21,187.11	Workers per Day	0.00
Bond		$211.87	Total Hours	0.01
Sell Price		**$21,398.98**	Markup Sales Tax (Overhead)	Yes
Adjusted Sell ()		$0.00	Markup Sales Tax (Profit)	Yes
Adjusted Sell Return	0.00 %	$0.00	Use Bond Table	Yes

Labor

Class Description	Percent of Total	Hours Distributed	Hourly Rate	Burden Rate	Burden Percent	Labor Cost
Journeyman	254777.07%	16.00	$99.49	$0.00	0.00%	$1,591.84
General Foreman	31847.13%	2.00	$85.51	$0.00	0.00%	$171.02
Totals	286624.20%	18.00	$97.94	$0.00	0.00%	$1,762.86

Mark Ups

	Total		OVERHEAD %		OVERHEAD Amount		PROFIT %	PROFIT Amount
Materials	$0.04	+	15.00%	+	$0.04	+	0.00%	$0.04
Labor	$1,762.86	+	15.00%	+	$2,027.29	+	0.00%	$2,027.29
Supplier Quotes	$16,433.00	+	15.00%	+	$18,897.95	+	0.00%	$18,897.95
SubContractors	$0.00	+	5.00%	+	$0.00	+	0.00%	$0.00

Bid Summary Report

103801 Beaumont Chang Orders **Estimator: Dan Alcantar** **Job #2336**

Direct Job Expense	$227.68	+	15.00%	$261.83	+	0.00%	$261.83
Equipment Rental	$0.00	+	15.00%	$0.00	+	0.00%	$0.00
Totals	**$18,423.58**		**15.00%**	**$21,187.11**		**0.00%**	**$21,187.11**

Tax Report

	Taxed Amount	Tax Rate %	Tax Amount
Materials	$0.04	0.00%	$0.00
Labor	$1,762.86	0.00%	$0.00
Supplier Quotes	$0.00	0.00%	$0.00
SubContractors	$0.00	0.00%	$0.00
Direct Job Expense	$0.00	0.00%	$0.00
Equipment Rental	$0.00	0.00%	$0.00
		Total Tax:	$0.00

Supplier Quotes

Name	Supplier	Tax (0.0 %)	Unit Cost	Multiplier	Amount
TSI CO#010 for CLAR#039		No	$16,433.00	1.00	$16,433.00
				Total:	$16,433.00

Direct Job Expense

Name	Supplier	Tax (0.0 %)	Unit Cost	Multiplier	Amount
Truck		No	$28.46	8.00	$227.68
				Total:	$227.68

TSI
Technical Systems Incorporated
2303 196th Street SW
Lynnwood, WA 98036
Tel: (425) 775-5696
Fax: (425) 775-9074
info@tsicontrols.com

Scope Letter: 3 pages

July 22, 2021 Quote Number: CO#10R1

To: Southern Contracting
Attn: Dan Alcantar

Project: Beaumont WWTP Salt Mitigation
Beaumont Wastewater Treatment Plant

Reference: **CLARIFICATION 39 - Added Effluent Analyzer Panel T&M**

Bid Date: N/A Bid Time: N/A

Technical Systems, Inc. (TSI) is pleased to provide a quote for the above referenced project. Material for this project will be shipped FOB Lynnwood WA, complete, ready for field termination by others. TSI's price includes CA sales tax and does not include the cost to bond TSI's portion of the project.

TSI's price for the scope of work detailed on the following pages:

Change Order Proposal Pricing – T&M Up To 7/22/2021: $16,433.00

Change Scope as Follows:

- Modify LCP-7472 and Add Instrumentation per CLAR-39 T&M Proposal:
  - Provide Material as indicated by Charles Reynolds, See Attached Itemization
- Replace pH Sensor for LCP-7472

Hours and Task:

Person	Day	Hrs	Comment
Colin	3/18/2021	1	Quoting and correspondence
Colin	3/19/2021	3	Quoting and Ordering, update BOM and CO documentation
Colin	5/24/2021	1	Coordination
Mike Y	6/24/2021	8	Startup
Colin	6/24/2021	1	Startup Support (Order new pH)
Mike Y	7/14/2021	4	Startup
Colin	7/21/2021	2	CO Documentation
Mike Long	7/22/2021	2	CO Management

See Attached Material Sheet.

Terms: Net 30
FOB: Lynnwood WA
Freight: Prepaid

This quote is valid for 90 days.

Please call with any questions you may have concerning pricing or any technical questions.

Sincerely,

Colin Dightman-Kovak

Colin Dightman-Kovak
Technical Systems, Inc.
1-425-678-4116

Scope of Work

Misc Equipment:

Including:

1. Hardware Procurement
2. Required Testing
3. O&M, drawings updates

GENERAL

1. TSI supplies a bill of materials, CAD-based drawings, and Operations and Maintenance Manuals for all equipment furnished by TSI.

2. TSI supplies the required field startup services for this project.

3. Panels fabricated by TSI are UL 508 labeled.

STANDARD INCLUSIONS

We provide the following unless specifically excluded on our bill of material:

1) Equipment shipped FOB factory with freight allowed, tailgate, destination.
2) Field wiring diagrams showing interconnection of field instruments and instrumentation panels.
3) Instruction manuals as required.
4) All necessary field start-up and calibration of the equipment we supply.

STANDARD EXCLUSIONS

We do NOT include the following unless specifically included in our bill of material:

1) Pipe, tubing, valves or fittings between the instrument and the process.
2) Conduit, wire or cable not an integral part of the instrument.
3) Mounting brackets, stanchions, supports or mounting pads not an integral part of the instrument.
4) Labor to install the equipment.
5) The Cost, (if due to local union regulations), to have local craftsman make adjustments or wiring modifications to our equipment during

start-up and calibration.

6) Any material or services not in our quoted sections.
7) This proposal is based on award of a supply purchase order and does not include any of the costs associated with bonding or subcontract administration. If bonding or a subcontract is required they can be provided for additional cost.

SPECIFIC EXCLUSIONS

1) No Specific Exclusions

Beaumont WWTP Salt Mitigation TSI Project No. 7781				
TSI Change Order No.: 10R1	Description:	*Added Effluent Turbidity/Conductivity Analyzer Panel*		
Category	**Amount**	**Units**	**Rate**	**Notes**
Project Management - design/fabrication	2	Hours	$170.00/Hr	Management, Design Review
Project Management - programming/commissioning	0	Hours	$170.00/Hr	
Engineering	8	Hours	$170.00/Hr	
Programming	0	Hours	$170.00/Hr	
Field Engineering	12	Hours	$145.00/Hr	
Travel Time (Field Engineering)	4	Hours	$145.00/Hr	
Fabrication	0	Hours	$145.00/Hr	
Engineering Support (O&Ms, submittals)	0	Hours	$95.00/Hr	No Drawings or O&M Supplied
CAD	0	Hours	$95.00/Hr	No Drawings or O&M Supplied
Labor Total	$4,020.00			
Travel Expenses	$200.00			by car. 2 days SU @ 100/day gas/meals
Freight Expenses	$200.23			Est. Freight Costs.
Subcontractors Cost	$0.00			
Materials	$11,026.46			
SUBTOTAL:	$15,446.69			
Bonding @ % of Subtotal:	$0.00	0.00%		*Bond Rate (if applicable)*
Tax:	$986.30	*7.75%*		*Tax Rate (if taxable)*
TOTAL COST:	**$16,433.00**			
Notes:				

MATERIAL COST ESTIMATE				
Quantity	Cost	Ext. Cost	Part #	Description
1	$2200.00	$2,200.00	LXZ524.99.A0006	SC4200c Controller LAN Bundle, Includes SC4200c, LAN Adapter, MSM Startup by Hach
1	$1018.40	$1,018.40	D3725E2T	Digital Inductive Conductivity Sensor, Convertible Body Style
1	$445.00	$445.00	9180200	Flow Cell Assembly for 3/4" NPT Sensor
0	$2095.25	$0.00	8573000	CL17sc Colorimetric Total Chlorine Analyzer, IP66, 1/4" OD Inlet polythylene tube, quick disconnect fitting, 1/2" ID Outlet flexible hose, Pressure Regulator Installation Kit, Wall Mount, 12VDC, 400mA max
1	$2522.80	$2,522.80	LXV445.99.53112	TU5300sc Low Range Laser Turbidimeter with Flow Sensor, Automatic Cleaning, RFID, and System Check, EPA Version
1	$1204.60	$1,204.60	LZY907.97.00002	Maintenance Kit for TU5300sc and TU5400sc Laser Turbidimeter, with RFID Sealed Vials
		$0.00		
1	$829.19	$829.19	CSD362412SS	Concept Wall Mount Enclosure, NEMA 4X, 36"L x 24"W x 12"D
1	$53.24	$53.24	CP3624	Enclosure Backpan, Painted Mild Steel, for Enclosure 36"L x 24"W
1	$185.85	$185.85	DAH2001A	Enclosure Heater, 200 W, 120 VAC/1.7 A, Forced Air with Thermostat
1	$124.45	$124.45	105TX	Unmanaged Ethernet Switch, 5-port 10/100 Copper, 10-30VDC Supply
		$0.00		
1	$1,004.70	$1,004.70	DPD1P1	pH Sensor to replace the one needing maintenance
		$0.00		
		$0.00		
		$0.00		
		$0.00		
		$0.00		
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		$0.00		
		$0.00		
		$0.00		
		$0.00		
		$0.00		
		$0.00		
		$9,588.23	**Materials Cost Subtotal**	
Inflation percentage:	0%	$0.00	Materials Cost Inflation (for parts to be purchased more than 6-months out)	
		$9,588.23	**Materials Cost + Inflation (if applicable)**	
Markup percentage:	15%	$1,438.23	Markup	
		$11,026.46	**TOTAL Material Cost + Markup**	

TSI Technical Systems Inc.
2303 196th Street SW
Lynnwood, WA 98036
Tel 425.775.5696
Fax 425.775.9074

Service Rates for 2021

The following is a list of hourly rates for Service work that includes Project/Software Engineering, Field Service, and Shop Fabrication and Repair.

Project Engineer/Software Engineer	$170.00 per Hour
Field Engineer/Technician	$145.00 per Hour
Shop Technician/Shop Repair	$ 95.00 per Hour

Services in excess of 10 hours per day, Monday through Friday, will be billed at 1.5 times the hourly rate. Saturdays, Sundays, and all business holidays will be billed at 2 times the hourly rate. Emergency services are billed at a minimum of four (4) hours plus $100.00 which is paid to the on-call technician or engineer. All travel time will be billed, portal to portal, at the hourly rate in effect on the day of travel. For employee personal vehicles, mileage will be billed at the IRS standard mileage rate.

General Terms and Conditions

Services will be billed via invoice, with field service reports, every two (2) weeks. All meal expenses are included in the hourly rate. All other expenses, (hotel, airline, rental car, etc.), will be billed at documented cost plus 10% service charge. All invoices are Net 30 days.

Panel fabrication is F.O.B. Lynnwood, Washington.

All prices are net prices and do not include any State, local or use taxes.

Prices are valid for a period of 60 Days unless specified.

Standard Warranty Policy

Technical Systems Inc. warrants defects in material and workmanship for all systems supplied by ***Technical Systems, Inc***. for a period of one (1) year beginning on the date of shipment. Individual component warranties will be limited to the published warranty for the component purchased and supplied by ***Technical Systems Inc.*** All published warranties provided by the component manufacturers will be assigned, in their entirety, to the end user. No warranties are verbally expressed or implied. Defective materials or workmanship will be repaired or replaced free of charge during the warranty period. Labor, travel and other expenses to repair or replace components at the end user's facility will be billed to the end user in accordance with the above Standard Labor Policy.

DAILY WORK REPORT

SOUTHERN CONTRACTING COMPANY, INC.
P. O. BOX 445 — SAN MARCOS, CALIFORNIA

60352
LICENSE #222252

TO _____ SUPT. OR FOREMAN C. Benishek JOB NO. 103801

LOCATION Beaumont DAY OF WEEK Tuesday DATE 7-20-2021

DESCRIPTION Re wire instruments at Effluent flow channel CLAR-039

CUSTOMER APPROVAL X _____

TIME SHIFT START 6:00 AM TIME SHIFT STOP 2:30 PM

CLASSIFICATION	EMPLOYEE'S NAME LAST NAME	FIRST NAME	INITIAL	TOTAL HRS.	REG HRS.	RATE	AMOUNT	O.T. HRS.	RATE	AMOUNT	TOTAL LABOR COST
ELEC	Benishek	Carl		2		99 49					
ELEC	Mckees	Ed		8		85 51					
ELEC	Monserrat	Carlos		8		85 51					

NO.	SIZE	EQUIPMENT	TOTAL HRS.	RATE	S. T. AMOUNT	RATE	S. T. AMOUNT
	F250	Service Truck	8	28 46			

[HEAD OFFICE USE ONLY]

LABOR (INCLUDES PAYROLL TAXES, INSURANCE, AND UNION BENEFITS	
MATERIALS, SUBS, SERVICES & RENTALS	
SUB-TOTAL	
OVERHEAD ____ %	
PROFIT ____ %	
TOTAL ____ %	
EQUIPMENT	
TOTAL	

[HEAD OFFICE USE ONLY]

INVOICE OR DELIVERY TICKET NO.	QTY.	PURCHASES OF MATERIALS, SUBS, SERVICES & RENTALS	AMOUNT

CITY OF BEAUMONT WASTE WATER TREATMENT PLANT
SALT MITIGATION UPGRADE PROJECT

CLARIFICATION 39

To (Construction Manager):	Stantec Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com
From (Engineer):	Aqua/SKM Engineering Attention: Boris Petkovic Phone: 801-683-3734 Email: boris.petkovic@aquaeng.com

Subject: Effluent Sampling and Instrumentation	**Location: Recycled Water Pump Station**

Reference Documents: Drawing Nos. RWM-1, RWM-4

CLARIFICATION

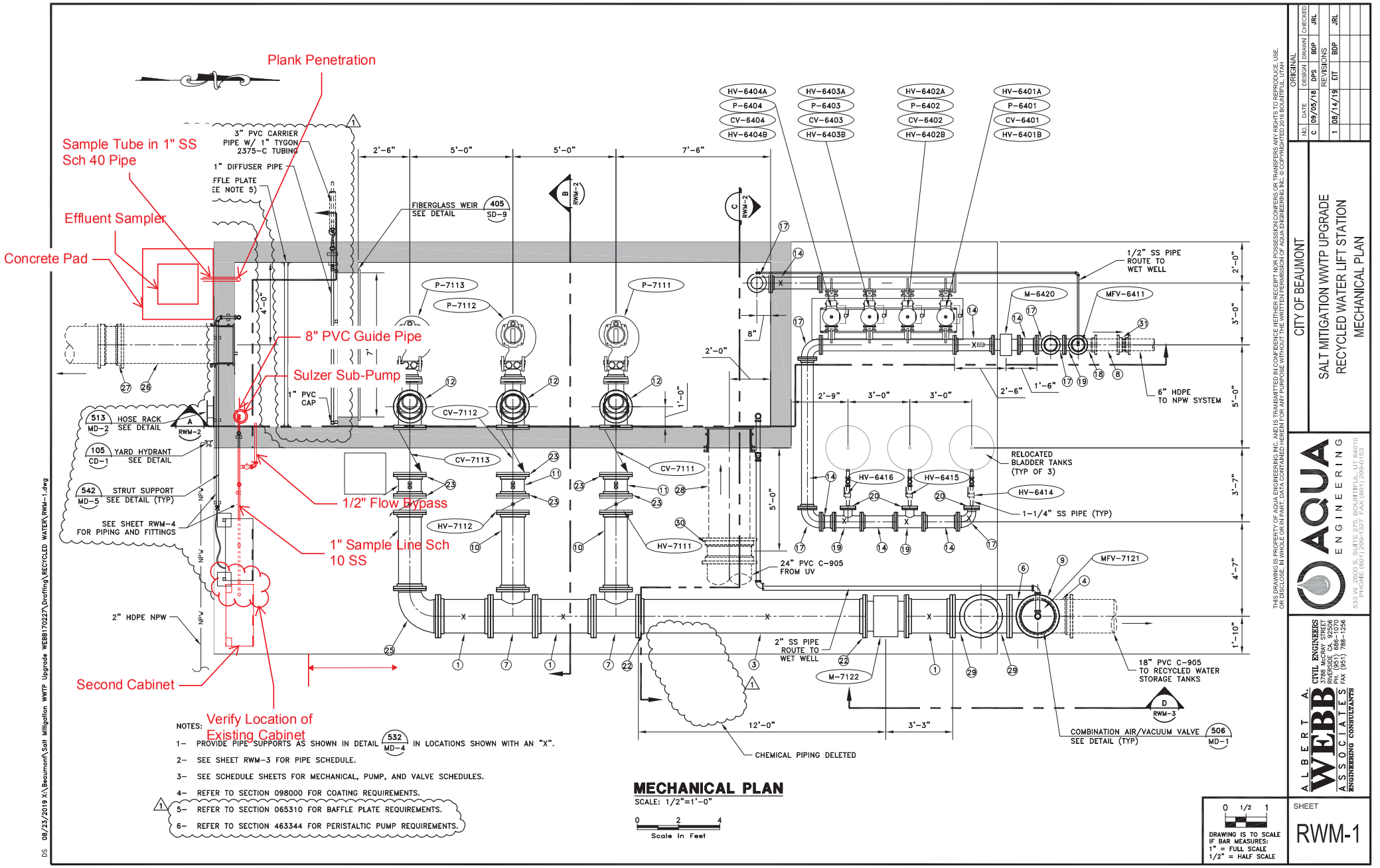
Note the following:

The City desires to purchase new instrumentation and effluent sampler. The clarification outlines the required modifications to the Recycled Water Pump Station and provides a list of required instruments. This work also includes the removal and replacement of the sampling pump. Required electrical/controls work is described below:

Power for the new submersible pump will be provided from LP-HW1 through conduits P7471 and P7471A, utilizing the same 2 #10 wires and #10 ground used to power the current metering pump. Conduit P7471A will need to be rerouted to access the new pump location. The submersible pump comes with a plug, so the subcontractor will either need to provide a dedicated outlet near the pump's location (as shown on RWM-1),or remove the plug and hardwire the pump into conduit P7471A (hardwire is preferred). The new sampler will also require power. The original documents on sheet LE-15 are showing the sampler being relocated and a new dedicated outlet for it. We assume this outlet is already installed and a conduit from it over to the new location should be installed and power it through that conduit.

The fiber to copper media converter will need to be replaced by an unmanaged Ethernet switch with a fiber uplink, in order to connect to both the new SC4200 and the SC4200 previously installed. Power will also need to be extended to the new SC4200 transmitter and 4-20mA signals from the transmitter to RIO-HW will be sent via the two spare twisted shielded cables. Connect the two spare control wires to a spare discrete output in RIO-HW to control the effluent sampler.

Prepared By (Name): Boris Petkovic, Aqua Engineering	**Date**: Dec. 17, 2020
Distributed By:	**Date**:



NOTES:

1– PROVIDE PIPE SUPPORTS AS SHOWN IN DETAIL 532 MD-4 IN LOCATIONS SHOWN WITH AN "X".

2– SEE SHEET RWM-3 FOR PIPE SCHEDULE.

3– SEE SCHEDULE SHEETS FOR MECHANICAL, PUMP, AND VALVE SCHEDULES.

4– REFER TO SECTION 098000 FOR COATING REQUIREMENTS.

1 5– REFER TO SECTION 065310 FOR BAFFLE PLATE REQUIREMENTS.

6– REFER TO SECTION 463344 FOR PERISTALTIC PUMP REQUIREMENTS.

MECHANICAL PLAN

SCALE: 1/2"=1'-0"

0 2 4
Scale In Feet

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	09/05/18	DPS	BDP	JRL
REVISIONS				
1	05/14/19	EIT	BDP	JRL

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
RECYCLED WATER LIFT STATION
MECHANICAL PLAN

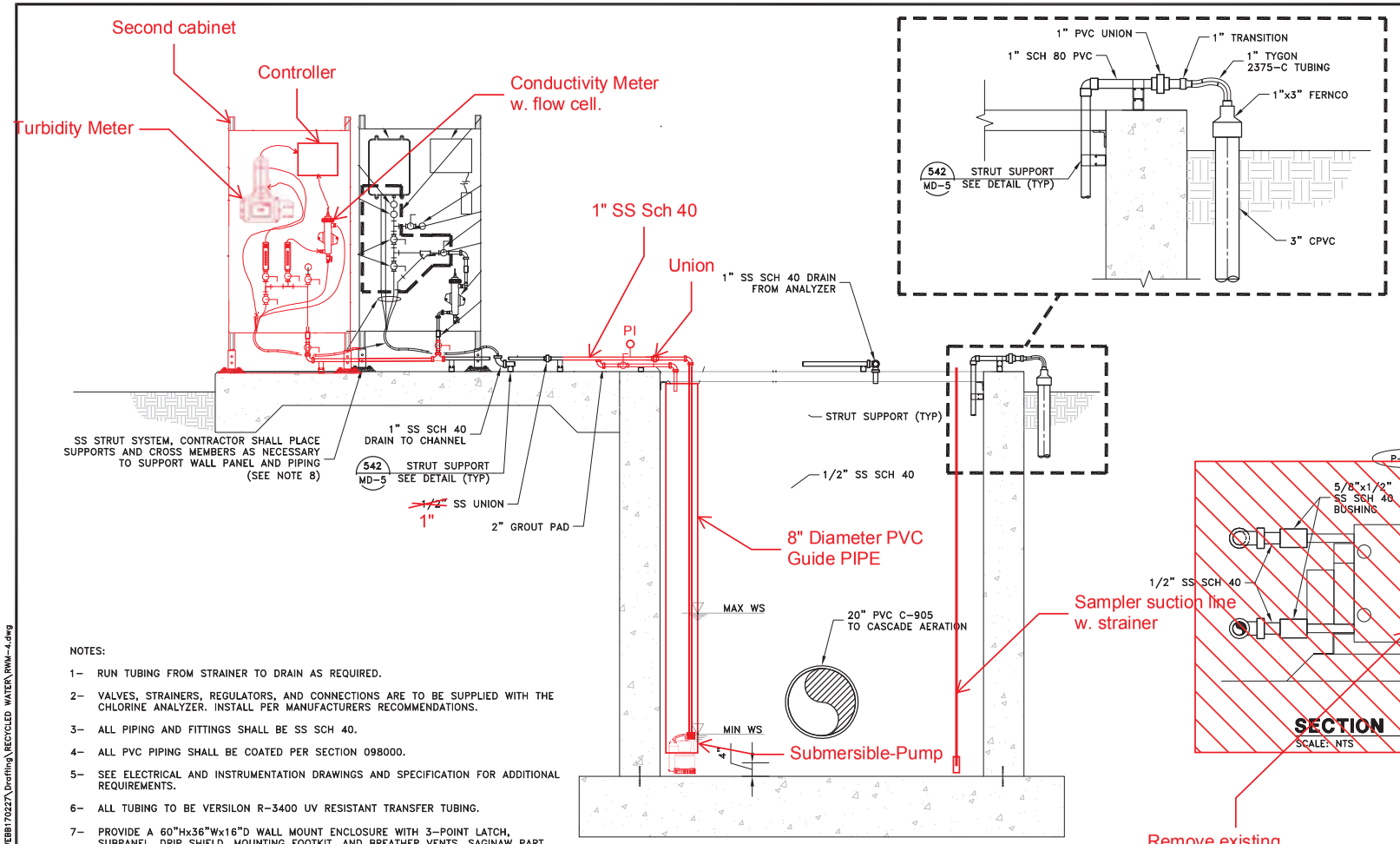
AQUA ENGINEERING
533 W. 2600 S., SUITE 275, BOUNTIFUL, UT 84010
PHONE: (801) 299-1327 FAX (801) 298-0153

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
(951) 686-1070
FAX (951) 788-1256

DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

SHEET
RWM-1

DS 08/23/2019 X:\Beaumont\Salt Mitigation WWTP Upgrade WEBB170227\Drafting\RECYCLED WATER\RWM-1.dwg



NOTES:

1- RUN TUBING FROM STRAINER TO DRAIN AS REQUIRED.

2- VALVES, STRAINERS, REGULATORS, AND CONNECTIONS ARE TO BE SUPPLIED WITH THE CHLORINE ANALYZER. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

3- ALL PIPING AND FITTINGS SHALL BE SS SCH 40.

4- ALL PVC PIPING SHALL BE COATED PER SECTION 098000.

5- SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

6- ALL TUBING TO BE VERSILON R-3400 UV RESISTANT TRANSFER TUBING.

7- PROVIDE A 60"Hx36"Wx16"D WALL MOUNT ENCLOSURE WITH 3-POINT LATCH, SUBPANEL, DRIP SHIELD, MOUNTING FOOTKIT, AND BREATHER VENTS. SAGINAW PART NUMBERS SCE-60EL3616LPPL, SCE-60P36, SCEDS36N4, SCE-ELMFK4 AND SCE-BVK OR EQUAL.

8- DESIGN OF CABINET SUPPORTS SHALL BE A DEFERRED SUBMITTAL AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

9- CABINET SUPPORTS SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING SECTIONS:
051200 (STRUCTURAL STEEL)
055000 (METAL FABRICATIONS)

10- CABINET SUPPORTS SHALL BE IN ACCORDANCE WITH OSHA AND SHALL BE PREPARED, STAMPED, AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA.

11- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FROM METAL FABRICATOR FOR ALL MISCELLANEOUS METAL, SUPPORTS, ETC.

12- ALL CABINET SUPPORTS SHALL BE STAINLESS STEEL.

13- ALL HARDWARE AND CONCRETE ANCHORS SHALL BE 316 STAINLESS STEEL.

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	08/14/19	EIT	BDP	JRL
REVISIONS				

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
RECYCLED WATER LIFT STATION
MECHANICAL SECTION

AQUA ENGINEERING
533 W. 2600 S. SUITE 275, BOUNTIFUL, UT 84010
PHONE: (801) 298-1327 FAX (801) 298-0153

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PHONE (951) 686-1070
FAX (951) 788-1256

0 1/2 1
DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

SHEET
RWM-4

DS 08/23/2019 X:\Beaumont\Salt Mitigation WWTP Upgrade WEBB170227\Drafting\RECYCLED WATER\RWM-4.dwg

5800
Refrigerated Sampler

The 5800 Refrigerated Sampler is Teledyne ISCO's answer to the rigorous demands of water monitoring, with user-friendly controls and task accommodating features. Along with easy control and on-site programmability, it also has a unique slide-out bottle rack to easily access sample containers.

The only choice for stationary sampling in both municipal and industrial wastewater applications.

The controller actively regulates and displays the sample compartment temperature and logs a 24-hour summary to confirm proper sample cooling. The temperature record is downloadable using a basic utility program, such as Tera Term, or data can be viewed on the unit display.

The 5800 Sampler follows the Teledyne ISCO standard for weather and corrosion resistance. The tough, double-wall LLDPE cabinet protects against exposure in harsh environments. The well-insulated cabinet promotes temperature stability. Samples remain cool in hot and humid conditions, and a built in heater prevents freezing in cold conditions.

Electro- and powder-coating protects the stainless steel components of the refrigeration system, ensuring long life and reliability in corrosive treatment plant conditions.

The 5800 Sampler uses proven peristaltic pump technology to deliver samples at the EPA-recommended line velocity of at least 2 ft/s (0.6 m/s), and at head heights up to 25 feet (7.6 m).
Sample volume accuracy is assured by the pump revolution counter and Teledyne ISCO's liquid detection system.

The 5800 sampler offers different glass and plastic bottle configurations to meet various sampling programs.

Applications:

- Wastewater treatment plants
- Industrial pretreatment
- Influent and effluent sampling

Standard Features:

- Composite or sequential sampling
- Operating range of -20 to 120 °F (-29 to 49 °C), without additional heaters
- Four digital alarm outputs
- 4-20 mA and DC pulse flowmeter input
- Powerful compressor delivers energy-efficient, high-performance cooling
- Four stored programs
- Lifting handles for easy installation

ISCO

TELEDYNE ISCO
Everywhereyoulook™

5800 Refrigerated Sampler

Size (HxWxD):	52 x 29 x 33 in (132 x 74 x 84 cm)
Weight (empty) :	195 lb (88.5 kg)
Refrigerator Body:	Linear low-density polyethylene
Power Requirements:	115VAC, 60 Hz, or 230 VAC, 50 Hz
Operational Temperature:	-20 ° to 120 °F (-29 ° to 49 °C) The display response time may be longer at temperatures below 0 °F

Pump

Intake Suction Tubing	
-Length:	3 to 99 ft (0.9 to 30 m)
-Material:	Vinyl or FEP-lined PE
-Inside Diameter:	3/8 in (9 mm)
Pump Tubing Life:	Typically 1,000,000 pump counts
Maximum Suction Lift:	28 ft (8.5 m)
Typical Repeatability:	±5 ml or ±5% of the average volume in a set, whichever is greater, at lifts up to 25 ft
Typical Accuracy at Lifts Up to 25 ft:	±10 ml or ±10% of programmed value, whichever is greater
Typical Line Velocity at Head Height:	3 ft (0.9 m) head height: 3.0 ft/s (0.9 m/s) 10 ft (3 m) head height: 2.9 ft/s (0.88 m/s) 15 ft (4.6 m) head height: 2.7 ft/s (0.82 m/s)
Liquid Presence Detector:	Non-wetted, non-conductive sensor detects when liquid sample reaches the pump to automatically compensate for changes in head heights

Controller

Enclosure Rating:	NEMA 4X, 6 (IP67)
Program Memory:	Non-volatile ROM
Flow Meter Signal Inputs:	5 to 15 volt DC pulse or 25 ms isolated contact closure for Teledyne ISCO flow meters. 4–20 mA input or non-Teledyne ISCO flow meters
Digital Alarms:	4 programmable outputs; 5V, 100 mA
Number of Composite Samples:	Programmable from 1 to 999 samples

Software

Sample Frequency:	1 minute to 99 hours 59 minutes, in 1-minute increments 1 to 9,999 flow pulses
Sampling Modes:	Constant time – constant volume, constant time – variable volume, variable time – constant volume, (flow modes are controlled by external flow meter signal)
Programmable Sample Volumes:	10 to 9,990 ml in 1 ml increments
Sample Retries:	If no sample is detected, up to 3 attempts; user selectable
Rinse Cycles:	Automatic rinsing of suction line up to 3 rinses for each sample collection
Controller Diagnostics:	Tests for RAM, ROM, pump, display, and electrical components

Ordering Information

5800 Refrigerated Sampler

Suction line, strainer, and bottle configuration not included; order separately.

115V/60Hz	68-5800-001
230V/50Hz	68-5800-002
230V/50Hz w/ Chinese Display	68-5800-003

Bottle Configurations

Twenty-four 1-liter PP bottles	68-5800-015
Twenty-four 350-ml glass bottles	68-5800-016
Four 10-liter round PE bottles	68-5800-005
Four 10-liter round glass bottles	68-5800-006
Four 20-liter square PE bottles	68-5800-019
Two 10-liter round PE bottles	68-5800-007
Two 10-liter round glass bottles	68-5800-008
One 20-liter round PE bottle	68-5800-011
One 20-liter round glass bottle	68-5800-012
One 10-liter round PE bottle	68-5800-009
One 10-liter round glass bottle	68-5800-010
Twenty-four 1-liter ProPak bottles	68-5800-017
One 10-liter ProPak bottle	68-5800-018

Teledyne ISCO
P.O. Box 82531, Lincoln, Nebraska, 68501 USA
Toll-free: (800) 228-4373 • Phone: (402) 464-0231 • Fax: (402) 465-3091

teledyneisco.com

TELEDYNE ISCO
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L-1149 Rev 2.0
9/18

3700 Series
Inductive Conductivity Sensors

Applications

- Drinking Water
- Wastewater
- Clean Water
- Industrial Water
- Metal and Mining
- Chemical
- Food and Beverage
- Pulp & Paper
- Surface Water
- Steam Systems

PT#D3725E2T

Service Protected

Wide Measuring Range

Hach's Inductive Conductivity Sensors measure from 200 up to 2,000,000 microSiemens/cm. A built-in PT1000 resistance temperature detector (RTD) compensates the measured conductivity for changes in process temperature.

Low Maintenance Design

The inductive sensor design eliminates polarization and electrode coating problems that commonly affect conventional contacting electrode-type conductivity sensors.

Versatile Mounting Styles

Sensors can be installed using a choice of four mounting styles - immersion, insertion, union, and sanitary.

Withstands Harsh Environments

The inductive sensor is available in sanitary (CIP) flange style and convertible styles in PFA, polypropylene, PEEK, and PVDF material. Selected sensors can withstand high pressures and temperatures.

Full-Featured "Plug and Play" with Digital SC Controllers

There are no complicated wiring or set up procedures with any Hach SC controller. Just plug in any combination of Hach digital sensors and it's ready to use - it's "plug and play."

One or multiple sensors - the SC controller family allows you to receive data from up to eight Hach digital sensors in any combination using a single controller.

Communications - multiple alarm/control schemes are available using the relays and PID control outputs. Available communications include analog 4-20 mA, digital Modbus (RS485 and RS232) or Profibus DP protocols. (Other digital protocols are available. Contact your Hach representative for details.)

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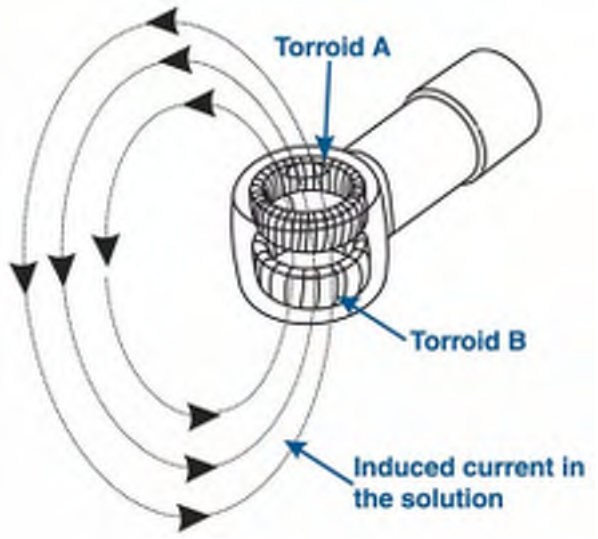
Technical Data*

Range	200 - 2,000,000 microSiemens/cm
Operating Temperature Range	-10 - 200 °C (14 - 392 °F); limited by sensor body material and mounting hardware.
Flow Rate	3 m (10 ft.) per second, maximum
Temperature Sensor	PT1000 RTD
Sensor Cable	Polypropylene and PVDF Sensors: 5 conductor (plus two isolated shields) cable with XLPE (cross-linked polyethylene) jacket; rated to 150 °C (302 ºF); 6 m (20 ft.) long PEEK and PFA Sensors: 5 conductor (plus two isolated shields) cable with PFA-coated jacket; rated to 200 °C (392 °F); 6 m (20 ft.) long
Wetted Materials	Polypropylene, PVDF, PEEK or PFA
Pressure/ Temperature Limits	Polypropylene: 6.9 bar at 100 °C (100 psi at 212 °F) PVDF: 6.9 bar at 120 °C (100 psi at 248 °F) PEEK and PFA: 13.8 bar at 200 °C (200 psi at 392 °C) Maximum pressure is dependent on mounting hardware.

**Subject to change without notice.*

Principle of Operation

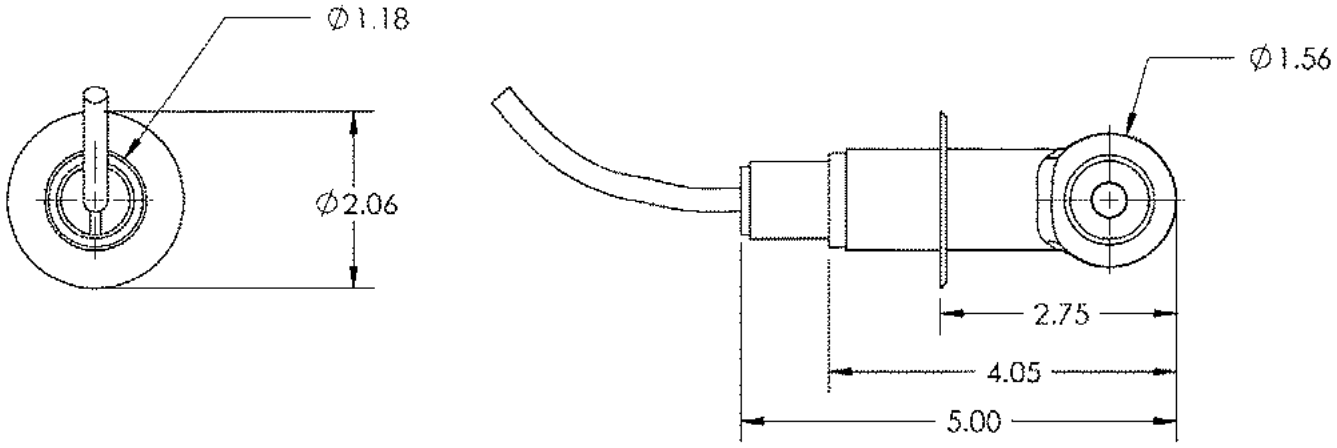
Inductive conductivity sensors induce a low current in a closed loop of solution, then measure the magnitude of this current to determine the solution's conductivity. The conductivity analyzer drives Toroid A, inducing an alternating current in the solution. This current signal flows in a closed loop through the sensor bore and surrounding solution. Toroid B senses the magnitude of the induced current which is proportional to the conductance of the solution. The analyzer processes this signal and displays the corresponding reading.



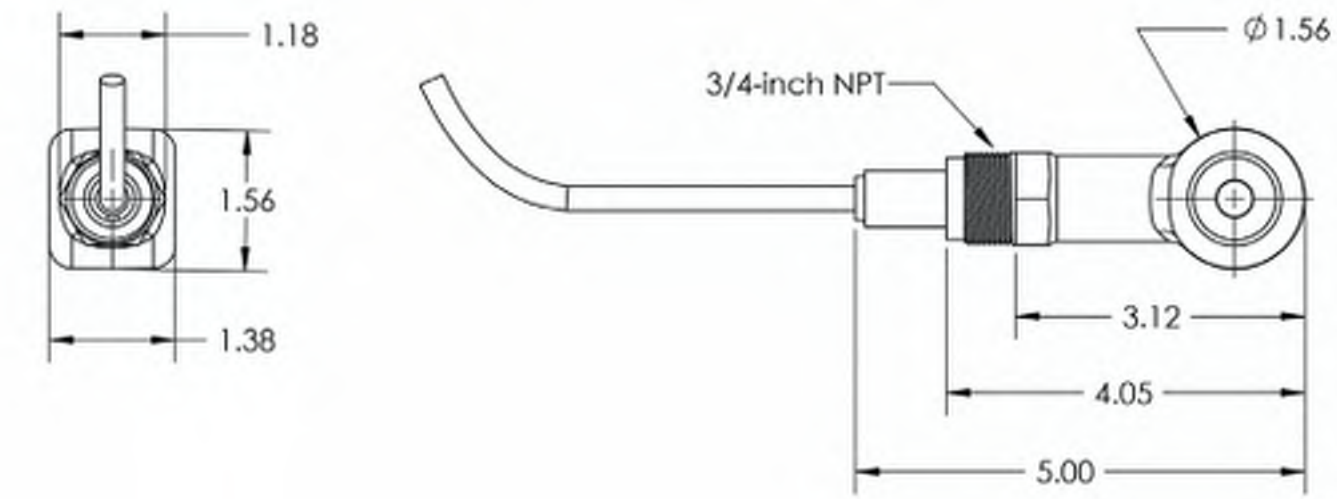
Dimensions

In inches (in.).

Sanitary Style



Convertible Style



Common Applications

Industry	Application	Recommended Sensor Style (and Material)
Metals Finishing and Mining	Plating bath monitoring	Convertible (Polypropylene)
	Alkaline/caustic wash	Convertible (Polypropylene)
	Rinse water	Convertible (Polypropylene)
	Pickling processes	Convertible (PVDF)
	Metals recovery	Convertible (PEEK)
	Copper floatation	Convertible (PEEK)
	Scrubbers	Convertible (Polypropylene)
Chemicals and Refining	Acid production	Convertible (PFA)
	Caustic production	Convertible (PFA)
	Phosphates	Convertible (PFA)
	Fertilizers	Convertible (PFA)
	Detergents	Convertible (PFA)
	Glycerin	Convertible (PVDF)
	Moisture detection	Convertible (PVDF or PFA)
	Scrubbers	Convertible (PVDF)
	Wastewater	Convertible (PVDF)
	Oil well drilling mud	Convertible (PEEK)
	Leak detection	Convertible (PEEK)
	Alkylation	Convertible (PFA)
	Spill detection	Convertible (PEEK)
Food and Beverage	Brine concentration	Convertible (Polypropylene)
	Desalting	Convertible (Polypropylene)
	Cheese production	Sanitary (PFA)
	Caustic peeling	Convertible (PFA)
	Pickle making	Sanitary (Polypropylene)
	CIP applications	Sanitary (PFA)
	Rinse water control	Convertible (Polypropylene)
	Sugar carbonation	Convertible (PFA)
Pulp and Paper	White, black and green liquor	Convertible (PEEK)
	Stock washing	Convertible (PEEK)
	Wash and cooking liquor control	Convertible (PEEK)
	Scrubbers	Convertible (PEEK)
	Spill detection	Convertible (PEEK)
Textile Manufacturing	Rinse water	Convertible (Polypropylene)
	Dye baths	Convertible (Polypropylene)
	Bleaching	Convertible (Polypropylene)
	Mercerizing	Convertible (Polypropylene)
	Acid washing	Convertible (Polypropylene)
	Carbonizing and scouring baths	Convertible (Polypropylene)
Natural Waters, Lakes, Streams, and Sea Water	Water pollution monitoring	Convertible (Polypropylene)
	Salt intrusion	Convertible (Polypropylene)
	Salinity	Convertible (Polypropylene)
Clean Water Treatment	Ion exchange regeneration	Convertible (Polypropylene)
	Reverse osmosis concentrate monitoring	Convertible (Polypropylene)
	Softener regeneration	Convertible (Polypropylene)
	Acid/caustic concentration control	Convertible (PVDF)
Wastewater Treatment	Acid/caustic concentration control	Convertible (PEEK)
	Spill detection	Convertible (PEEK)
Steam Generation	Boiler blowdown	Convertible (Polypropylene)
	Flue gas scrubbers	Convertible (Polypropylene)

Order Information

3700sc Digital Inductive Conductivity Sensors & Accessories

All digital inductive sensors come complete with standard sensor cable (6 m/20 ft.), digital gateway, and digital extension cable (1 m/3.3 ft.).

D3705E2T	Digital Inductive Conductivity Sensor, Sanitary Body Style, Polypropylene Body Material
D3706E2T	Digital Inductive Conductivity Sensor, Sanitary Body Style, PVDF Body Material
D3708E2T	Digital Inductive Conductivity Sensor, Sanitary Body Style, PFA Body Material
D3725E2T	Digital Inductive Conductivity Sensor, Convertible Body Style, Polypropylene Body Material
D3726E2T	Digital Inductive Conductivity Sensor, Convertible Body Style, PVDF Body Material
D3727E2T	Digital Inductive Conductivity Sensor, Convertible Body Style, PEEK Body Material
D3728E2T	Digital Inductive Conductivity Sensor, Convertible Body Style, PFA Body Material
6120800	Use the Digital Gateway to connect analog Hach 3700 inductive conductivity sensors to a Hach digital controller.
6122400	Digital Extension Cable, 1 m (3.3 ft.)
5796000	Digital Extension Cable, 7.7 m (25 ft.)
5796100	Digital Extension Cable, 15 m (50 ft.)
5796200	Digital Extension Cable, 31 m (100 ft.)
5867000	Digital Termination Box

3700 Analog Inductive Conductivity Sensors & Accessories

All analog sensors come complete with standard sensor cable (6 m/20 ft.).

3705E2T	Analog Inductive Conductivity Sensor, Sanitary Body Style, Polypropylene Body Material
3706E2T	Analog Inductive Conductivity Sensor, Sanitary Body Style, PVDF Body Material
3708E2T	Analog Inductive Conductivity Sensor, Sanitary Body Style, PFA Body Material
3725E2T	Analog Inductive Conductivity Sensor, Convertible Body Style, Polypropylene Body Material
3726E2T	Analog Inductive Conductivity Sensor, Convertible Body Style, PVDF Body Material
3727E2T	Analog Inductive Conductivity Sensor, Convertible Body Style, PEEK Body Material
3728E2T	Analog Inductive Conductivity Sensor, Convertible Body Style, PFA Body Material
1W1100	Analog Interconnect Cable, order per foot
60A2053	Junction Box, Surface-mount, aluminum (includes mounting hardware)
60A9944	Junction Box, Pipe-mount, PVC (for 1/2-inch diameter pipe, includes mounting hardware)
60G2052	Junction Box, Pipe-mount, PVC (for 1-inch diameter pipe, includes mounting hardware)
76A4010-001	Junction Box, NEMA 4X (no mounting hardware included)

Choice of body styles:

Sanitary (CIP) - 2-inch flange, special cap, and EPDM compound gasket. Conforms to provisions of 3-A Sanitary Standards.

Convertible - 2-inch NPT, designed for tee, other flow through, insertion, and pipe mountings for immersion.

Order Information

Conductivity Reference Solutions

25M3A2000-X 100 / 200 / 400 / 500 / 600 / 1000 µS/cm, 1 L each

25M3A2050-X 1000 / 1500 / 2000 µS/cm, 1 L each

25M3A2100-X 2000 / 2500 / 3000 / 5000 / 10,000 / 50,000 / 100K / 150K µS/cm, 1 L each

25M3A2200-X 200K / 300K µS/cm, 1 L each

25M3A2300-X 300K / 350K / 450K / 500K µS/cm, 1 L each

The conductivity reference solutions are available in different concentrations, see listed values per main number.
To get the fully appropriate order number please replace the "X" with the according µS/cm concentration value from the list.

Mounting Hardware

MH018S8SZ Sanitary Mount, 316 SS
Includes 316 SS sanitary 2-inch tee, heavy-duty clamp, special cap, and EPDM compound gasket.

MH518N3NZ Union Mount, 316 SS

Union Mount, CPVC

MH568N3NZ Union Mount, PVDF
Includes adapter and a 2-inch pipe tee. Union adapters are used with convertible style sensors that are to be union or flange mounted into a standard 2-inch NPT pipe tee or insertion mounted into a 2-inch ball valve assembly.

MH432G Immersion Mount, CPVC Pipe
Includes ½-inch diameter x 4-foot pipe, ½- x ¾-inch NPT coupling, and plastic pipe-mount junction box with terminal strip.

MH138M9NZ Insertion Mount, CPVC

MH118M9NZ Insertion Mount, 316 SS
Includes 2-inch NPT insertion assembly with ball valve.

9180200: Hach Flow Cell for ¾ in. NPT sensors

Service Protected

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

DOC053.53.35303.Oct19

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hach.com

HACH® Be Right™

TU5 Series Turbidimeters

Applications
- Drinking Water
- Power
- Beverage
- Pharmaceutical

Service Protected

The next standard in the evolution of turbidity

Only the new TU5 Series Lab & Process Turbidimeters with 360° x 90° Detection™ deliver unprecedented confidence that a change in your reading is a change in your water.

Groundbreaking 360° x 90° Detection™ Technology

The TU5 Series employs a patented optical design that sees more of your sample than any other turbidimeter, delivering the best low level precision and sensitivity while minimizing variability from test to test.

Matching lab and online results

For the first time you will be able to remove the uncertainty of which measurement to trust, thanks to identical 360° x 90° Detection™ Technology in both instruments.

Everything about turbidity – faster

The TU5 Series dramatically reduces the time needed to get a turbidity measurement you can rely on, with 98% less online sample surface area to clean, sealed vials for calibration, and the elimination of the need for indexing and silicone oil in the lab. Not to mention, a smaller online sample volume means you will detect events almost immediately.

No surprises

Prognosys™ monitors your TU5 Series online instrument, proactively alerting you to maintenance needs before your measurement becomes questionable. And a Hach Service Agreement protects your investment and helps ensure that you stay in compliance and on budget.

USEPA and ISO 7027 reporting: The TU5 Series Turbidimeters apply the instrument design and meet performance criteria established by EPA Approved Hach Method 10258 and ISO 7027-1:2016, making them suitable for regulatory reporting.

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Technical Data*

TU5200

Light Source	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW) or Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Range	EPA: 0 - 700 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 175 EBC ISO: 0 - 1000 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 250 EBC
Accuracy	±2 % plus 0.01 NTU from 0 - 40 NTU; ±10 % of reading from 40 - 1000 NTU based on Formazin primary standard (at 25 °C)
Resolution	0.0001 NTU / FNU / TE/F / FTU / EBC / mg/L
Repeatability	<40 NTU: Better than 1% of reading or ±0.002 NTU on Formazin at 25 °C, whichever is greater >40 NTU: Better than 3.5% of reading on Formazin at 25 °C
Stray Light	<10 mNTU
Units	NTU, FNU, TE/F, FTU, EBC; mg/L if calibrated with Degrees calibration curve
Operating Temperature Range	10 - 40 °C (50 - 104 °F)
Operating Humidity	80% at 30 °C (non condensing)
Sample Temperature	4 - 70 °C (39 - 158 °F)
Storage Conditions	-30 - 60 °C (-22 - 140 °F)
Power Requirements (Voltage)	100 - 240 VAC
Power Requirements (Hz)	50/60 Hz
Certifications	CE compliant US FDA accession number: 1420493-000 EPA version, 1420492-000 ISO version Complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50) Australian ACMA Marking
Dimensions (H x W x D)	195 mm x 409 mm x 278 mm
Weight	2.4 kg (5.29 lbs.)
Warranty	1 year

TU5300sc / TU5400sc

Light Source	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW) or Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Range	EPA: 0 - 700 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 175 EBC ISO: 0 - 1000 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 250 EBC
Accuracy	±2% or 0.01 NTU from 0 - 40 NTU ±10% of reading from 40 - 1000 NTU based on Formazin primary standard
Resolution	0.0001 NTU / FNU / TE/F / FTU / EBC
Repeatability	Better than 1% of reading or ±0.002 NTU (TU5300) or ±0.0006 NTU (TU5400) on Formazin at 25 °C (77 °F), whichever is greater
Stray Light	<10 mNTU
Units	NTU, FNU, TE/F, FTU, EBC
Signal Average Time	TU5300sc: 30 - 90 seconds TU5400sc: 1 - 90 seconds
Response Time	TU5300sc: T90 <45 seconds at 100 mL/min TU5400sc: T90 <30 seconds at 100 mL/min
Sample Temperature	2 - 60 °C (35 - 140 °F)
Sample Pressure	6 bar (87 psi) maximum, compared to air at sample temperature range from 2 - 40 °C (35.6 - 104 °F)
Sample Flow Rate	100 - 1000 mL/min; optimal flow rate: 200 - 500 mL/min
Operating Temperature Range	0 - 50 °C (32 - 122 °F)
Operating Humidity	Relative humidity: 5 - 95% at different temperatures, non-condensing
Storage Conditions	-40 - 60 °C (-40 - 140 °F)
Enclosure Rating	Electronic compartment IP55; all other functional units IP65 with process head/ACM attached to the TU5300sc/TU5400sc instrument
Certifications	CE compliant US FDA accession number: 1420493-000 EPA version, 1420492-000 ISO version Australian ACMA Marking
Dimensions (H x W x D)	249 mm x 268 mm x 190 mm
Weight	5.95 lbs. (2.7 kg); 11 lbs. (5.0 kg) with all accessories
Warranty	1 year

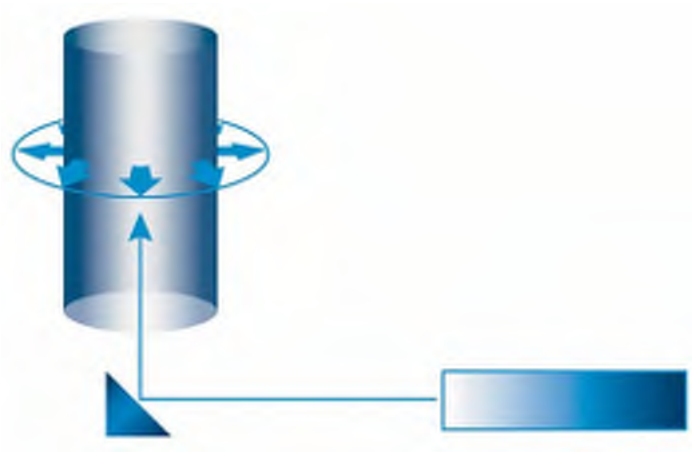
Subject to change without notice.

Principle of Operation

The TU5 Series turbidimeters measure turbidity by directing a laser into a sample to scatter off suspended particles. The light that is scattered at a 90° angle from the incident beam is reflected through a conical mirror in a 360° ring around the sample before it is captured by a detector.

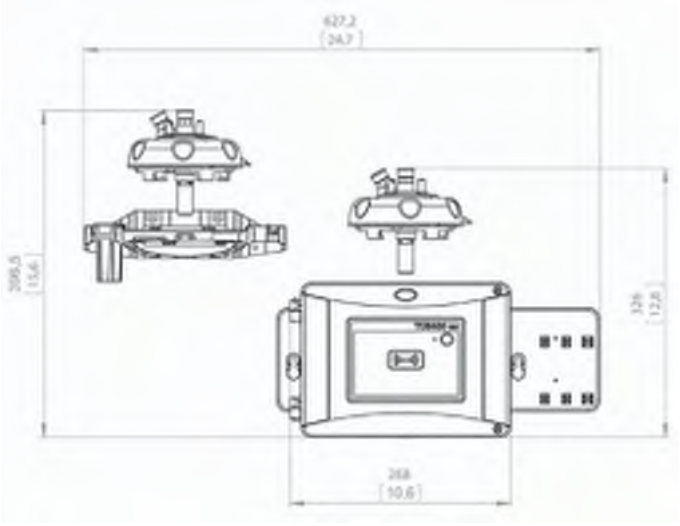
The amount of light scattered is proportional to the turbidity of the sample. If the turbidity of the sample is negligible, little light will be scattered and detected by the photocell and the turbidity reading will be low. High turbidity, on the other hand, will cause a high level of light scattering and result in a high reading.

The 360° x 90° optics of the TU5 series were optimized for high accuracy at low turbidity ranges and therefore the TU5 does not include ratio technology. Ratio technology is only applicable for high turbidity applications which have interference from color and large particles.

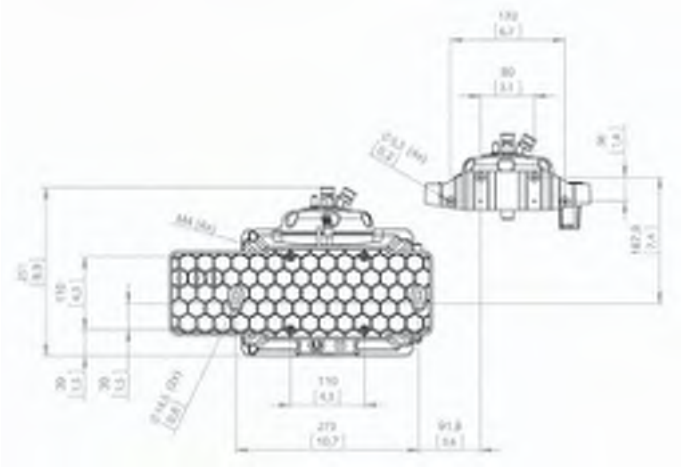


Dimensions

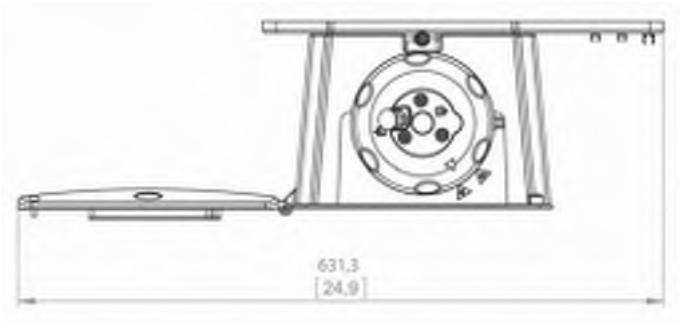
TU5300sc and TU5400sc front view



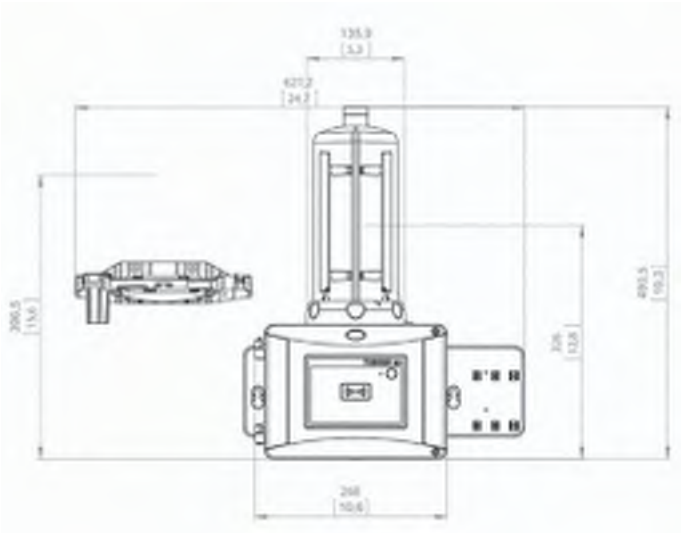
TU5300sc and TU5400sc rear view



TU5300sc and TU5400sc top view



TU5300sc and TU5400sc with automatic cleaning module



Order Information

TU5200 Benchtop Laser Turbidimeters

LPV442.99.03012	TU5200 Benchtop Laser Turbidimeter with RFID, EPA Version
LPV442.99.01012	TU5200 Benchtop Laser Turbidimeter without RFID, EPA Version
LPV442.99.03022	TU5200 Benchtop Laser Turbidimeter with RFID, ISO Version
LPV442.99.01022	TU5200 Benchtop Laser Turbidimeter without RFID, ISO Version

TU5300sc/TU5400sc Online Laser Turbidimeters

LXV445.99.10112	TU5300sc Low Range Laser Turbidimeter, EPA Version
LXV445.99.10212	TU5400sc Ultra-High Precision Low Range Laser Turbidimeter, EPA Version
LXV445.99.53112	TU5300sc with Flow Sensor, Automatic Cleaning, RFID, and System Check, EPA Version
LXV445.99.53212	TU5400sc with Flow Sensor, Automatic Cleaning, RFID, and System Check, EPA Version

Please note: Other turbidimeter configurations are available and RFID may not be available in all areas. Please contact your local Hach representative.

Please note: An SC controller is required for operation of the TU5300sc or TU5400sc.

Calibration and Verification

LZY835	StablCal® Calibration Set with RFID
LZY898	StablCal® Calibration Set without RFID
LZY901	Glass Rod Secondary Turbidity Standard <0.1 NTU/FNU
LZY834	Replacement Vial for TU5300sc and TU5400sc
LZV946	Sample Vials for TU5200

TU5 Series Accessories

LQV159.97.00002	Automatic Cleaning Module for TU5300sc and TU5400sc
LQV160.99.00002	Flow Sensor for TU5300sc and TU5400sc
LZY876	Desiccant Cartridge for TU5300sc and TU5400sc
LZY907.97.00002	Maintenance Kit for TU5300sc and TU5400sc
LQV157.99.50002	SIP10 Sipper Unit for TU5200
LZY903	Manual Vial Wiper for TU5200, TU5300sc, and TU5400sc

Accessories are included with the model # LXV445.99.53112

Service Protected

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

DOC050.53.10053.Sep19

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hach.com

HACH® Be Right™

User Instructions

9180100, 9180200, 9180300 and 9180400 Flow Cells

The flow cells are supplied with English or metric fittings.

English: 9180100 for 1 in. NPT sensors, 9180200 for ¾ in. NPT sensors
Metric: 9180300 for 1 in. NPT sensors, 9180400 for ¾ in. NPT sensors

NOTICE

Inlet pressure 50 PSIG (345 kPa) maximum 0–40 ºC (32–104 ºF). Do not exceed sensor maximum operating pressure and temperature. Maximum flow rate: 2 gal/min (7.5 L/min).

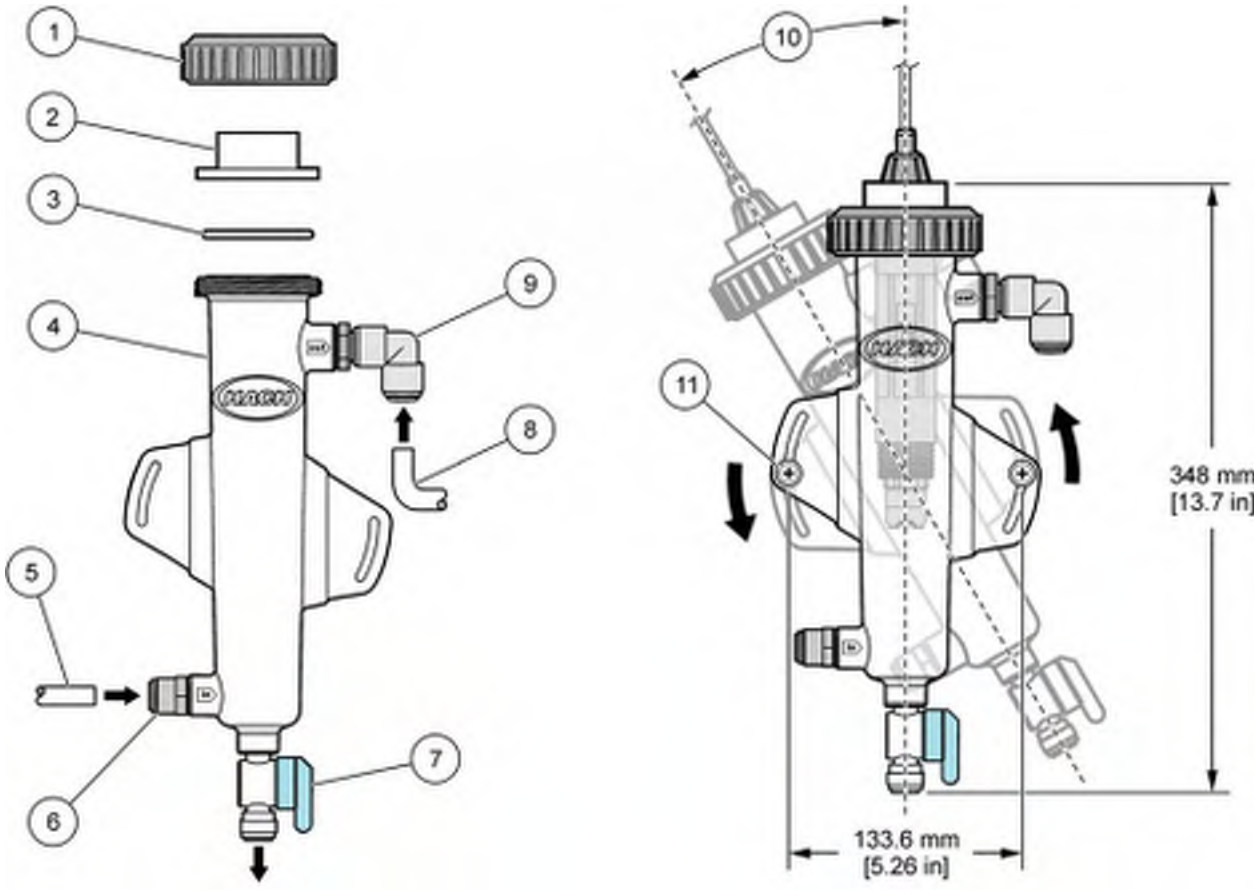
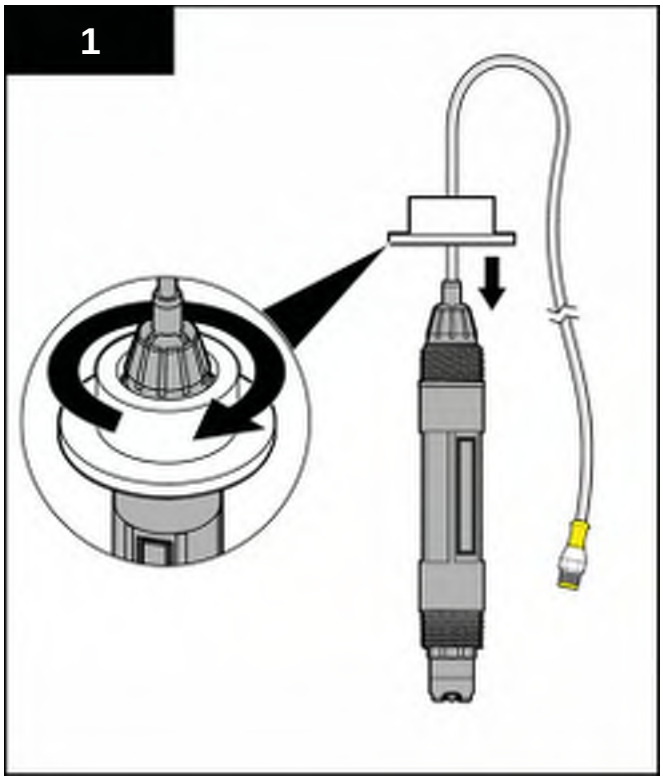
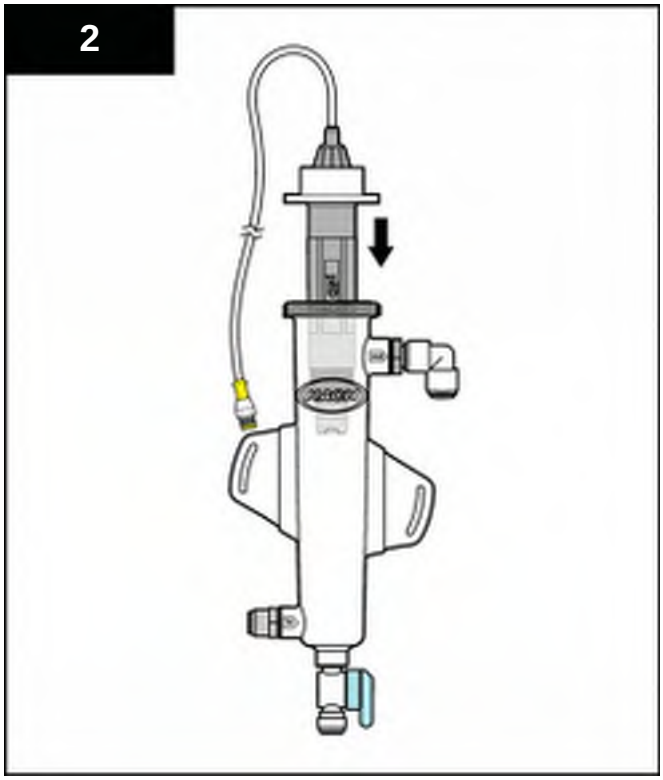
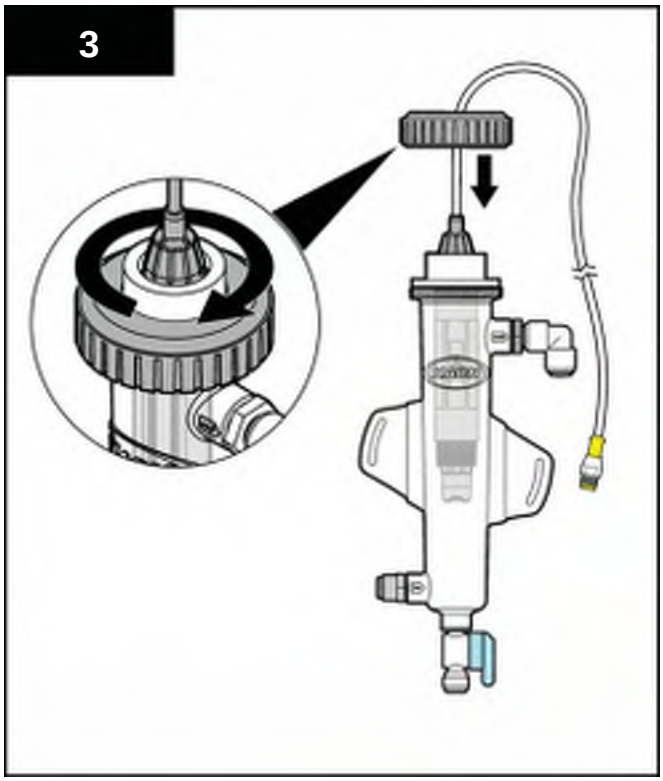


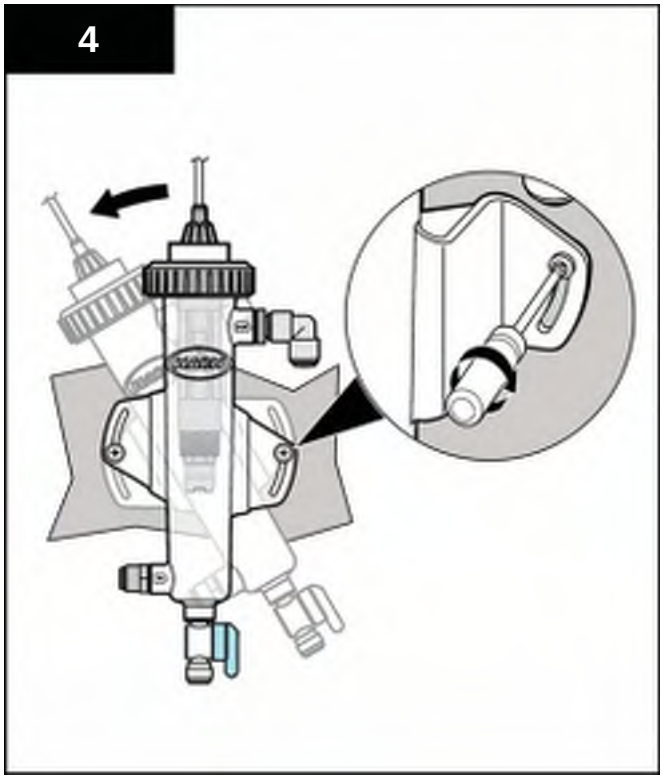
Figure 1 Flow Cell components and features

1	Lock ring (60F2032-001)	**7**	Speed-fit valve - 3/8 in. OD (9005300)
2	Sealing hub - 1 in. (60F2021-001) Sealing hub - ¾ in. (9159800)	**8**	**English:** ½ in. OD tube, customer supplied **Metric:** 12 mm OD tube, customer supplied
3	O-ring (5H1223)	**9**	**English:** Speed-fit elbow fitting - ½ in. OD (9196900) **Metric:** Speed-fit elbow fitting - 12 mm OD (9197000)
4	Flow cell body (9159700)		
5	**English:** 3/8 in. OD tube, customer-supplied **Metric:** 10 mm OD tube, customer-supplied	**10**	If air bubbles become trapped below probe sensor, flow cell may be rotated up to 30° from vertical.
6	**English:** Speed-fit fitting - 3/8 in. OD (9159300) **Metric:** Speed-fit fitting - 10 mm OD (9196500)	**11**	Screw (#10-32 or M5) (2x), customer supplied









HACH Company World Headquarters

P.O. Box 389
Loveland, Colorado 80539-0389 U.S.A.
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Fax (970) 669-2932
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intl@hach.com

Edition 1, October 2009 sm/sm

TECHNICAL BROCHURE
BLSP03

LSPO3AT

LSPO3AV

LSPO7

LSP03/LSP07

SUBMERSIBLE SUMP PUMPS

GOULDS
WATER TECHNOLOGY
a xylem brand

FEATURES

Corrosion-resistant construction

Stainless Steel motor casing and fasteners

Glass-filled thermoplastic impeller and casing.

Upper and lower heavy duty ball bearing construction.

Motor is permanently lubricated for extended service life and is powered for continuous operation. All ratings are within the working limits of the motor.

Hard coated 400 series stainless steel shaft for improved corrosion resistance.

Float switch is adjustable for various liquid levels. Easily removed for direct pump operation or switch replacement.

Complete unit is lightweight, portable and easy to service.

Available in manual and automatic versions. See next page for specific order numbers.

A double labyrinth lip seal system protects the motor. It consists of three lip seals and a V-ring in addition to an impeller counterblade system which keeps solid particles away from the seal unit.

AGENCY LISTINGS

Canadian Standards Association
File #LR114251

Underwriters Laboratories
File #83318

APPLICATIONS

Specially designed for the following uses:

- Basement draining
- Water transfer
- Dewatering

SPECIFICATIONS

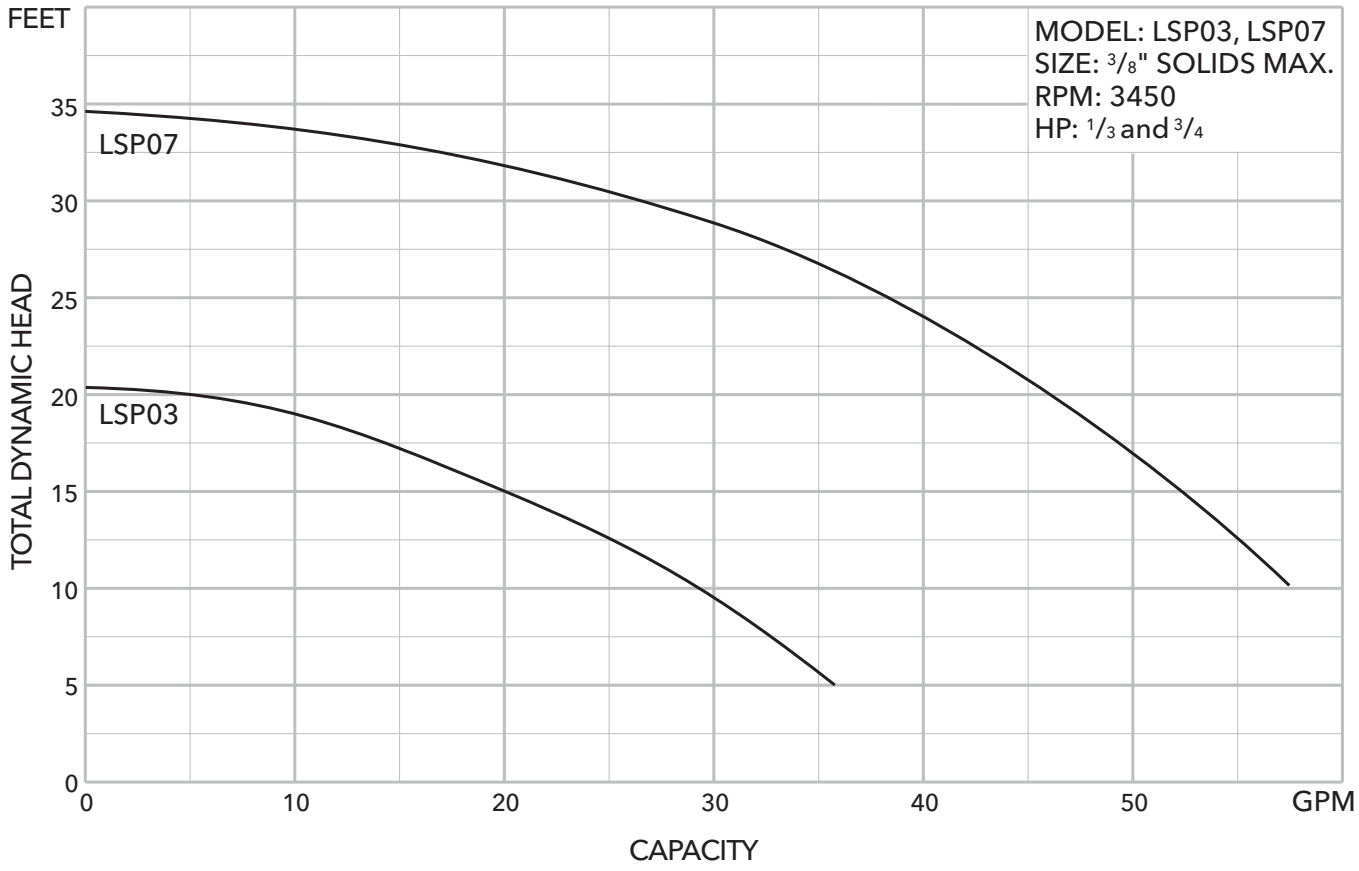
- Discharge size: 1 ½" NPT
- Capacities: to 57 GPM
- Maximum head: 34 feet TDH
- Maximum solids: ⅜" spherical
- Temperature: 104° F (40° C) maximum liquid temperature.
- Maximum pump submergence is 10 ft. for LSP03; 16 ft. for LSP07.

MOTOR

- Single phase, 3450 RPM, 60 Hz
  - LSP03, ⅓ HP, 115 V, 2.9 maximum amps
  - LSP07, ¾ HP, 115 V (7.1 amps) or 230 V (3.5 amps)
- Built-in thermal overload protection with automatic reset.
- Permanent-split-capacitor type
- Class B insulation
- Stainless steel shaft
- Air filled design
- Power cord length: LSP03; 10 feet standard, 20 feet optional, LSP07; 20 feet.

FLOAT SWITCH OPTIONS

- Models are available with a float switch. Several options for automatic operation.
- "AV" models are supplied with a vertical float switch.
- "A" models are supplied with a built in float switch.
- "AT" models are supplied with a piggy-back replaceable float switch.



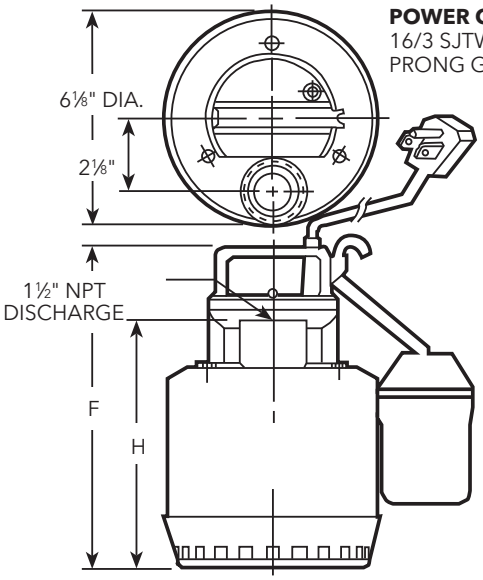
MODEL INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Min. On Level	Min. Off Level	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight lbs/kg
LSP0311						Plug / No Switch			Manual	Manual	9"		
LSP0311A						Built-In Wide Angle			11"	5"	12"		
LSP0311AT						Piggyback Wide Angle	10'		11"	5"	12"		
LSP0311AV	1/3	115	2.9			Piggyback Vertical			8.5"	2"	12"		11 / 5
LSP0311F						Plug / No Switch			Manual	Manual	9"		
LSP0311AF						Built-In Wide Angle	20'		11"	5"	12"		
LSP0311ATF				10	1	Piggyback Wide Angle		1½"	11"	5"	12"	3/8"	
LSP0711F						Plug / No Switch			Manual	Manual	9"		
LSP0711AF		115	7.1			Built-In Wide Angle			12.5"	6.5"	12"		
LSP0711ATF	3/4					Piggyback Wide Angle	20'		12.5"	6.5"	12"		15 / 6.8
LSP0712F						Plug / No Switch			Manual	Manual	9"		
LSP0712AF		230	3.5			Built-In Wide Angle			12.5"	6.5"	12"		
LSP0712ATF						Piggyback Wide Angle			12.5"	6.5"	12"		

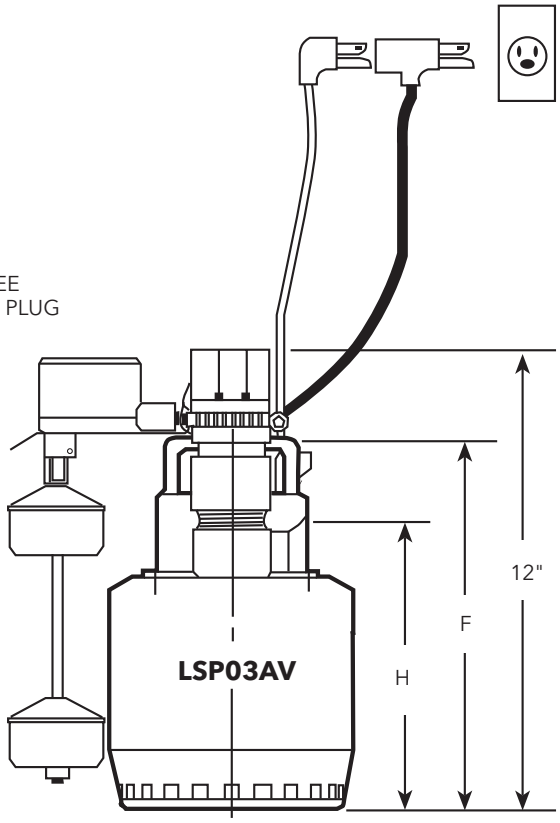
DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)

	F	H
LSP03	9¾	7⅝
LSP07	11¼	9⅛
LSP03AV	9¾	7⅝



POWER CORD:
16/3 SJTW WITH THREE
PRONG GROUNDING PLUG



xylem
Let's Solve Water

Xylem, Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.xyleminc.com/brands/goulds watertechnology

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-51	
Design Adjustment: WML COP-060 CLAR-40	Yard Piping – 3in Non-Potable Waterline & Valves

Reason for Design Changes:

To increase the robustness of the NPW system addition of several valves is proposed as shown in the attached drawing C-18. Depending on the size of the piping, the type of valves installed will vary between buried gate and ball valves.

Design and Scope Changes:

These changes are shown on the attached drawing and are summarized as follows:

- The onsite Fine Screens is a critical processing system requiring non-potable water for cleaning the screens. To further backup and maintain adequate flow to the Fine Screens system a non-potable water loop system shall be installed. This change request shall include the excavation and installation of a 3-inch HDPE non-potable water system by connection to the existing non-potable water at the Plant Headworks and route the new piping system to the southwest corner of the EQ basin.
- In a previous change order, a new UV structure and equipment was approved for construction. Requested in this change request is the installation of non-potable water to the UV structure and hose bibb for general purpose washdown. The contractor shall excavate and install a 2-inch HDPE non-potable waterline from a connection point east of the non-Pot pump station and route to the northwest corner of the UV shade canopy.
- The existing non-potable water piping system shall have gate and ball valves installed a various location shown on the modified drawing attached and as directed by City and MWH staff on site.
- In a previous change order modification were made to the EQ basins with the addition of a discharge pumping station. Requested in this change request is the installation of non-potable water to the pump station and hose bibb for general purpose wash and priming the pumps. The contractor shall excavate and install a 2-inch HDPE non-potable waterline from a connection point on the non-Pot system east of the Fine Screen and route to the southwest corner of the EQ Pump Station.

Cost Impact:

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of **$17,500.62** to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 060
(By Contractor)

To (Engineer/CM):	**From (Contractor)**:
MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com	W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com

PCO/DCM No.: CLAR-40

Subject: 3" Non Potable Water Tie-in

Reference Documents: Attached

DESCRIPTION

This COP is to modify the non-potable water tie-in locations behind the EQ basin as well as adding a hose bib at the EQ pump station, to add two gate valves on the south east side of the A-basin and add a hose bib on the west side of the UV station. This change order proposal includes the costs taken when T&M work was performed as well as the proposed cost of work and materials that will be done at the UV station and Fine Screens hose bib.

COST ESTIMATE

Total Cost: $ 17,500.62. – see attached breakdown.

SCHEDULE IMPACT

N/A

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Oscar Mendoza, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

7/14/2021

Reference #: CLAR - 40

Attention: Charles W. Reynolds

City of Beaumont WWTP Salt Mitigation Upgrade Project

DESCRIPTION: 3" NPW Tie-in

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	3" NPW Tie-in	1	LS	91	$ 7,560.03	$ 2,624.10	$ 4,883.12	$ -	$ 15,067.25
2		1	LS	0	$ -	$ -	$ -	$ -	$ -
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				91	$ 7,560.03	$ 2,624.10	$ 4,883.12	$ -	$ 15,067.25

Subtotal		$	15,067.25
Mark-up - Labor	15%	$	1,134.00
Mark-up - Equipment	15%	$	393.62
Mark-up - Materials	15%	$	732.47
Mark-up - Subcontractor	5%	$	-
Bond	1.0%	$	173.27
Total This Change Order		**$**	**17,500.62**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

3" NPW Tie-in

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
T&M Ticket 04/19/21	8			16			8														
T&M Ticket 04/23/21	1			1																	
T&M Ticket 04/27/21	4			8			4														
2" NPW line install (UV station)	4			8			4														
1" Hose bib install (UV Station)	1			2																	
2" Potable water line install (Fine Screens)	4			8			4														
1" Hose bib install (Fine Screens)	1			2																	
Brine Suction Relocation T&M	3																				
	26	0	0	45	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Rate			Hours			
Name	ST	PT	DT	ST	PT	DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	26	0	0	$2,088.94
Lab Pipe	$77.73	$103.27	$128.79	45	0	0	$3,497.76
Operator	$98.67	$131.84	$165.00	20	0	0	$1,973.34
Carp FM	$87.32	$117.91	$148.48	0	0	0	$0.00
Carp	$83.44	$112.07	$140.71	0	0	0	$0.00
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00
				91	0	0	
				Total Labor =			**$7,560.03**

B. Equipment

Description	17.230.	15.182	35.064	20.040	30.048		
T&M Ticket 04/19/21	8	2	1	6	1		
T&M Ticket 04/23/21	1	1					
T&M Ticket 04/27/21	4	1			4		
2" NPW line install (UV station)	4	1			4		
1" Hose bib install (UV Station)	1	1					
2" Potable water line install (Fine Screens)	4	1			4		
1" Hose bib install (Fine Screens)	1	1					
Brine Suction Relocation T&M	3						
	26	8	1	6	13	0	0

Number	Description	Rate	Hours	Extension
17.230.	1/2 Ton PickupChevy1500 Crew Cab	$29.60	26	$769.60
15.182	Gang TruckChevy3500 Service Bed	$29.60	8	$236.80
35.064	LoaderJohn Deere644J	$123.00	1	$123.00
20.040	CAT Excavator 330D	$109.80	6	$658.80
30.048	Loader Backhoe 410John Deere410L	$64.30	13	$835.90
			54	
		Total Equipment =		**$2,624.10**

C. Materials

	Quantity	Unit	Price	Extension
4" HDPE Tee	2	ea	$ 25.41	$50.82
6" x 4" HDPE Reducer	1	ea	$ 28.44	$28.44
3" HDPE 90 Bend	1	ea	$ 12.47	$12.47
4" x 3" HDPE Reducer	1	ea	$ 13.31	$13.31
4" x 2" HDPE Reducer	1	ea	$ 11.64	$11.64
2" HDPE 90 Bend	4	ea	$ 5.91	$23.64
3" HDPE to Sch 80 PVC Transition	1	ea	$ 120.70	$120.70
3" Isolation Valve	3	ea	$ 399.96	$1,199.88
4" Isolation Valve	1	ea	$ 425.12	$425.12
3" HDPE - 120'	120	ft	$ 2.00	$240.00
2" HDPE to SST Transition	2	ea	$ 61.88	$123.76
2" HDPE - 90'	90	ft	$ 1.28	$115.20
2" x 1" Bushing Reducer	2	ea	$ 27.09	$54.18
1" SST Pipe - 5'	4	ea	$ 99.20	$396.80
1" SST 90 Bend	4	ea	$ 17.42	$69.68
1" SST Ball Valve	4	ea	$ 52.75	$211.00
1" NPT Hose Adapter	2	ea	$ 10.00	$20.00
2" Sch 40 - 90 Bend	2	ea	$ 2.26	$4.52
2" SST to PVC Transition	1	ea	$ 47.41	$47.41
2" Sch 40 Pipe - 40'	1	ft	$ 121.44	$121.44
2" HDPE Tee	1	ea	$ 8.52	$8.52
2" HDPE Electrofusion Couplers	2	ea	$ 9.84	$19.68
Fill Sand	60	tn	$ 16.50	$990.00
Electrofusion Machine Rental	1	LS	$ 225.00	$225.00
Home Depot Receipt	1	LS	$ 92.75	$92.75
Tax	7.750%			$257.16
			Subtotal	$4,883.12
			Total Material =	**$4,883.12**

D. Subcontractor

	Quantity	Unit	Price	Extension
				$0.00
			Total Subcontract =	**$0.00**

SEE SHEET C-25

SEE SHEET C-26

BRINE METERING FACILITY
SEE SHEET C-31

Install valves (Two (2) 4-inch buried gate valves) per detail 106/CD-1.

Install valves (Two (2) buried ball valves) per detail 136/CD-4.

Install valves (Two (2) buried ball valves) per detail 136/CD-4.

SEE SHEET C-22

SEE SHEET C-23

SEE SHEET C-24

SEE SHEET C-19

SEE SHEET C-20

SEE SHEET C-21

SEE SHEET HM-1

AERATION BASINS

MEMBRANE BUILDING

SOLIDS FEED PUMP STATION

SOLIDS HOLDING TANK #2

SOLIDS HOLDING TANK #1

SOLIDS STORAGE BLOWERS

RECYCLE STORAGE TANK #2

RECYCLE STORAGE TANK #1

SOLIDS HANDLING BUILDING

SOLIDS LOADING FACILITY

FINE SCREENS

EQ BASIN

EQ BASIN

ELECTRICAL BUILDING AND GENERATOR

INFLUENT PUMP STATION

CHEMICAL STORAGE AREA #2

RECYCLED WATER PUMP STATION

UV DISINFECTION FACILITY

CASCADE AERATION STRUCTURE

STORM WATER LIFT STATION
SEE SHEET C-32

Install valves (Two (2) buried 6-inch gate valves) per detail 106/CD-1.

Install valves (Two (2) buried 6-inch gate valves) per detail 106/CD-1.

One 3" & one 4" buried gate valve

Install valves (Three (3) buried 2-inch ball valves) per detail 136/CD-4.

Install one (1) buried ball valve per detail 136/CD-4.

3"

Install new 2-inch HDPE (DR-11) and connect to existing system.

1" = 50'
25 0 50

0 1/2 1
DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

REGISTERED PROFESSIONAL ENGINEER
SHANE L. BLOOMFIELD
NO. C77435
CIVIL
STATE OF CALIFORNIA

NO.	DATE	DESIGN	DRAWN	CHECKED
C	9/5/18	SLB	SLB	BPK

ORIGINAL
REVISIONS

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
CIVIL
OVERALL YARD PIPING PLAN

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
CIVIL ENGINEERS
3788 McCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256

SHEET 65 of 334

C-18

G:\2017\17-0177\Drawings\Plan Sheets\17-0177-C-YP.dwg

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1945
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade Project No. 55.1173
Phase Code 99.010.0420 Date 4/23/2021

DESCRIPTION OF WORK

Fused 3" Tee South of the EQ basin for tie-in.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	1			
Jaime Perrotti	Laborer				
Jose Mendoza Rodriquez	Laborer	1			
Richard Grosser	Oper				

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	1	
Job Truck	15.182	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds Jr
Print Name Charles Reynolds
Title RE Date 4-27-21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 04/26/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1946
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade Project No. 55.1173

Phase Code 99.010.0420 Date 04/19/2021

DESCRIPTION OF WORK

Excavating, Sanding, bedding, installing & backfilling 3" HDPE to tie-in South of EQ Basin.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	8			
Jaime Pantoja	Lab.	8			
Jose Mendoza Rodriguez	Lab.	8			
Richard Grosser	Op.	8			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.930	1	8	
Job Truck	15.182	1	2	
JD Loader	35.064	1	1	
Cat Exc.	20.040	1	6	
JD Backhoe	30.048	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title R E Date 4/26/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.G. Date 04/26/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP [illegible] **Project No.** 55.1173
Phase Code 99.010.0420 **Date** 4/27/21

DESCRIPTION OF WORK

Finished up loop tie-in work. Opening valves, checking connections.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velazquez	FM	4			
Jaime Pantoja	Lab	4			
Jose Mendoza Rodriguez	Lab	4			
Richard Grosser	Oper	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.830	1	4	
Lab Truck	15.182	1	1	
Cat Exc.	30.048	1	4	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER Signature [signature]
Print Name Charles Reynolds
Title RE Date 4/27/21

W.M. Lyles Co. Signature [signature]
Print Name Samantha Robbins
Title F.E. Date 4/28/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name Salt Mitigation Upgrade Project Project No. 551173
Phase Code 99 010 0360U Date 10-16-2020

DESCRIPTION OF WORK

Relocate Suction Line at the Brine Meter Vault M.H.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Martin Barrera	FM	3			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.215	1	3	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

Acknowledgement of Time, Material & Equipment

CUSTOMER		W.M. Lyles Co.	
Signature	[signature]	Signature	[signature]
Print Name	Charles Reynolds	Print Name	Oscar Navarro
Title	Date 11/17/20	Title PM	Date 1/6/21

Job: 551173
Code: 140500040 - $75.37
Code: 990100360 - $17.38
AC: 10-19-2020

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BEAUMONT, CA 92223 (951)7690301

8987 00001 23604 10/15/20 08:59 AM
SALE CASHIER CRYSTAL

841804100349 VINYL TUBE <A> 9.67
5/80DX1/2IDX20' VINYL TUBE
078575177250 SS CLAMP <A>
#072 SS CLAMP 3"X5" DIA
2@1.98 3.96
051218574425 RUBBR MALLET <A> 17.98
VAUGHAN 18OZ NON-MARRING RUBBR MALLT
045242296927 MILW2PKMRK <A> 3.97
MKE INKZALL MED MARKER 2PK
644323999520 HUSKY TAPE M <A> 5.97
HUSKY TAPE MEASURE POUCH
NLP Savings $3.00
045242514311 25'AL-TAPE <A> 14.97
MILWAUKEE 25FT AUTOLOCK TAPE MEASURE
045242319480 MILW4PKMRK <A> 3.97
MKE INKZALL FINE PT BLACK MARKER 4PK
887480000795 SPLICER <A> 4.32
1/2" BARB X 1/2" BARB SPLICER BRASS
008925137580 DIABLO6TYP27 <A>
DIABLO BONDED 6"X.045X7/8 MTL T27
4@3.97 15.88
078575170657 SS CLAMP <A>
#006 SS CLAMP 3/8"X7/8" DIA
2@1.07 2.14
026703055550 HOMER BUCKET <A> 3.25
5 GAL BUCKET-HOMER LOGO (ORANGE)

SUBTOTAL	86.08
SALES TAX	6.67
TOTAL	$92.75

XXXXXXXXXXXX6264 HOME DEPOT

USD$ 92.75
AUTH CODE 015291/9010650 TA

WM LYLES CO
BARRERA MARTIN
Chip Read
AID A0000000049999084003O5 THD PLCC PROX

PRO XTRA MEMBER STATEMENT

PRO XTRA ###-###-1333 SUMMARY
THIS RECEIPT PO/JOB NAME: P015184

2020 PRO XTRA SPEND 10/14: $277,949.01
INCLUDES:
Pro Xtra Paint 2020 Savings $202.47

As of 10/15/2020 your Paint Rewards level is Bronze; Spend 0.95 more in qualifying paint purchases to earn Silver (15.0% off) on select paint items.

This purchase qualifies for FUEL DISCOUNTS and 60 DAYS TO PAY on The Home Depot Commercial Credit Card. Ask an Associate to learn more or go to homedepot.com/financeoptions.

8987 10/15/20 08:59 AM
8987 01 23604 10/15/2020 7931

RETURN POLICY DEFINITIONS

	POLICY ID	DAYS	POLICY EXPIRES ON
A	11	365	10/15/2021

Due to COVID-19, we have extended our

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-53	
Design Adjustment: WML COP-063 CLAR-46	Fine Screens Cleaning Pressure Washer Piping & Electrical

Reason for Design Changes:

A high-pressure wash system will be installed at the two existing fine screens to minimize the time required for manual washing by plant staff. Huber Technology will provide the required internal screen components, booster pump (P-1471), associated solenoid valves (SV-1417 and SV-1427) and labor required to install the internal screen components. The supply and discharge piping and misc. valves, instrumentation, pump and pipe supports shall be provided and installed by the contractor as indicated in the attached FSM-1 and -2 drawings.

Design and Scope Changes:

- The contractor shall procure and install all additional piping, fittings and electrical equipment as outlined in Clarification 46 attached.
- The contractor's quote shall also include all cost associated with rental of a temporary booster pump, VFD and piping utilized to pilot test the effectiveness of a high-pressure booster pump system prior to the final design of the permanent system.

Cost Impact:

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of **$82,276.27** to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 063
(By Contractor)

To (Engineer/CM):	**From (Contractor)**:
MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@mwhconstructors.com	W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com

PCO/DCM No.: DCM 40

Subject: Fine Screens Water Booster Pump

Reference Documents: CLAR 46

DESCRIPTION

Please review the attached Change Order Proposal for the addition of piping and supports as well as electrical scope in preparation for Huber's spray bar installation per CLAR 46.

Exclusions:

1. Installation of Spray Bar, Pump, Solenoid valves and final connections
2. Electrical Control Panels, Instrumentation and installation, Programming, Set-up of network and SCADA
3. Start-up and Commissioning of equipment

It's assumed that this work will occur before September 24th, 2021, otherwise additional overhead charges might be assessed. Thanks,

Oscar Mendoza

COST ESTIMATE

Total cost $ 82,276.27. See attached.

SCHEDULE IMPACT

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Oscar Mendoza, W.M. Lyles Co.
Grant Gourley, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

Date: 11-Aug-21

Reference #: CLAR 46

Attention:

JOB LOCATION: City of Beaumont WWTP Salt Mitigation Upgrade Project

CLAR 46 - Fine Screens Water Booster Pump

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	Fine Screens Water Booster Pump	1	LS	72	$ 5,659.19	$ 473.60	$ 6,310.69	$ 33,144.29	$ 45,587.77
2	T&M Work Related to CLAR 34 & 36	1	LS	92.5	$ 7,510.24	$ 1,394.86	$ 18,954.37	$ 1,500.00	$ 29,359.47
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				164.5	$ 13,169.43	$ 1,868.46	$ 25,265.06	$ 34,644.29	$ 74,947.24

Subtotal		$	74,947.24
Mark-up - Labor	15%	$	1,975.42
Mark-up - Equipment	15%	$	280.27
Mark-up - Materials	10%	$	2,526.51
Mark-up - Subcontractor	5%	$	1,732.21
Bond	1.0%	$	814.62
Total This Change Order		**$**	**82,276.27**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

Fine Screens Water Booster Pump

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason			Start-up Eng.		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	DY		
Install Piping and Supports	24			48																				
	24	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Name	Rate ST	PT	DT	Hours ST	PT	DT	Extension	
Lab Pipe FM	$80.34	$107.19	$134.03	24	0	0	$1,928.25	
Lab Pipe	$77.73	$103.27	$128.79	48	0	0	$3,730.94	
Operator	$98.67	$131.84	$0.10	0	0	0	$0.00	
Carp FM	$87.32	$117.91	$148.48	0	0	0	$0.00	
Carp	$83.44	$112.07	$140.71	0	0	0	$0.00	
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00	
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00	
Start-up Eng.	$750.00	$0.00	$0.00	0	0	0	$0.00	Rate: $750/Day
0	$0.00	$0.00	$0.00	0	0	0	$0.00	
				72	0	0		
				Total Labor =			**$5,659.19**	

B. Equipment

Description	F.Trk 17.120	RchLft 32.037	H.Crane 31.028	BH 30.048	JD350 20.041	SLft 77.020	WT2k 14.037	
Install Piping and Supports	16							
			0					
	16	0	0	0	0	0	0	0

Number	Description	Rate	Hours	Extension
17.120	Foreman Truck	$29.60	16	$473.60
32.037	ReachliftXtremeXR1055	$58.61	0	$0.00
31.028	Hydro Crane - 80 TonLink BeltRTC-8080 II 80 Ton	$164.01	0	$0.00
30.048	Loader Backhoe 410John Deere410L	$64.30	0	$0.00
20.041	ExcavatorJohn Deere350GLC	$151.12	0	$0.00
77.020	Scissor LiftJLG2646ES	$20.04	0	$0.00
14.037	Water TruckFordF750 2000 Gallon	$46.23	0	$0.00
			16	
		Total Equipment =		**$473.60**

C. Materials

	Quantity	Unit	Price	Extension
Attached McMaster-Carr Quote	1	LS	$ 4,090.45	$5,712.79
Small Tools ($2/MH)	72	MH	$ 2.00	$144.00
Tax	7.750%			$453.90
		Total Material =		**$6,310.69**

D. Subcontractor

	Quantity	Unit	Price	Extension
Electrical - Southern	1	LS	$33,144.29	$33,144.29
		Total Subcontract =		**$33,144.29**

City of Beaumont WWTP Salt Mitigation Upgrade Project

T&M Work Related to CLAR 34 & 36

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab FM			Cement Mason			Lab					
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
Relocate Sensor at Fine Screen - T&M 10/8/20	5	0.5		5	0.5																						
Install Temp Pump & Piping - 10/22-23,11/16	9	2.5		13	5																						
Extra Work from Fine Screens Clogging Up	21			31																							
	35	3	0	49	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Name	Rate ST	Rate PT	Rate DT	Hours ST	Hours PT	Hours DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	35	3	0	$3,133.61
Lab Pipe	$77.73	$103.27	$128.79	49	5.5	0	$4,376.63
Operator	$98.67	$131.84	$165.00	0	0	0	$0.00
Carp FM	$87.32	$117.91	$148.48	0	0	0	$0.00
Carp	$83.44	$112.07	$140.71	0	0	0	$0.00
Lab FM	$76.88	$101.99	$127.09	0	0	0	$0.00
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00
0	$0.00	$0.00	$0.00	0	0	0	$0.00
				84	8.5	0	
				Total Labor =			**$7,510.24**

B. Equipment

Description	17.12	18.305	31.028	30.048	20.041	77.02	14.037		
Relocate Sensor at Fine Screen - T&M 10/8/20	5								
Install Temp Pump & Piping - 10/22-23,11/16	9	5							
Extra Work from Fine Screens Clogging Up	21	4					2		
	35	9	0	0	0	0	2	0	0

Number	Description	Rate	Hours	Extension
17.12	Foreman Truck	$29.60	35	$1,036.00
18.305	1 Ton Gang TruckFordF350 Ext Ca	$29.60	9	$266.40
31.028	Hydro Crane - 80 TonLink BeltRTC	$164.01	0	$0.00
30.048	Loader Backhoe 410John Deere41	$64.30	0	$0.00
20.041	ExcavatorJohn Deere350GLC	$151.12	0	$0.00
77.02	Scissor LiftJLG2646ES	$20.04	0	$0.00
14.037	Water TruckFordF750 2000 Gallon	$46.23	2	$92.46
		Total Equipment =		**$1,394.86**

C. Materials

	Quantity	Unit	Price	Extension
McMaster Invoice 47567367	1	LS	$ 575.93	$575.93
McMaster Invoice 47416861	1	LS	$ 896.77	$896.77
McMaster Invoice 47411292	1	LS	$ 83.65	$83.65
McMaster Invoice 46654750	1	LS	$ 852.68	$852.68
Xylem Invoices - Temp Pump & VFD	1	LS	$ 12,908.75	$12,908.75
United Rental - 6" Pump	1	LS	$ 3,636.59	$3,636.59
Tax	0.000%		Included	$0.00
Commissioning, Schedule Support				
Freight				
			Total Material =	**$18,954.37**

D. Subcontractor

	Quantity	Unit	Price	Extension
Southern	1	LS	$1,500.00	$1,500.00
			Total Subcontract =	**$1,500.00**

McMASTER-CARR®

Delivers tomorrow via freight

1	**316 Stainless Steel Threaded Pipe Fitting** Low-Pressure, Bushing Adapter, 1 Male x 1/2 Female NPT 4452K175 Your reference:	1 Each	$10.28 Each	$10.28

Delivers tomorrow via freight

2	**316 Stainless Steel Threaded Pipe Fitting** Low-Pressure, 90 Degree Elbow Connector, 1/2 NPT Female 4452K414 Your reference:	6 Each	9.59 Each	57.54

Delivers tomorrow via freight

3	**316 Stainless Steel Threaded Pipe Fitting** Low-Pressure, Union Straight Connector, 2 NPT Female 4452K231 Your reference:	1 Each	88.30 Each	88.30

Delivers tomorrow via freight

4	**316 Stainless Steel Threaded Pipe Fitting** Low-Pressure, Tee Connector, 2 NPT Female 4452K439 Your reference:	1 Each	85.16 Each	85.16

Delivers tomorrow via freight

5	**Standard-Port 316 Stainless Steel Body On/Off Valve** with Lockable Lever Handle, 2 NPT Female 46325K34 Your reference:	1 Each	122.50 Each	122.50

Delivers tomorrow via freight

6	**Ultra-Corrosion Resistant Full-Port On/Off Valve** with Lockable Lever Handle, 1/2 NPT Female 46495K21 Your reference:	1 Each	36.92 Each	36.92

Delivers tomorrow via freight

7 **Medium-Pressure Stainless Steel Y-Strainer** — 1 Each — 175.21 Each — 175.21

with 1/32" Opening Perforated Screen, 1/2 NPT

4745K921

Your reference:

Screen Opening Size

1/32"

Delivers tomorrow via freight

8 **Standard-Wall 316/316L Stainless Steel Pipe** — 2 Each — 207.78 Each — 415.56

Threaded on Both Ends, 1/2 NPT, 120" Long

4816K49

Your reference:

Delivers tomorrow 11 am - 1 pm

9 **Extreme-Temperature Air and Steam Hose** — 1 Each — 86.09 Each — 86.09

with 316 Stainless Steel Fittings, 1/2 NPT Male x 1/2 NPT Female, 36" Long

5793T71

Your reference:

Length, in.

36

Delivers tomorrow via freight

10 **Panel-Mount On/Off Valve** — 2 Each — 159.33 Each — 318.66

316 Stainless Steel Body, Straight, 3/8 NPT Female, PTFE Seal

4118T121

Your reference:

Delivers tomorrow via freight

11 **316 Stainless Steel Threaded Pipe Fitting** — 9 Each — 8.62 Each — 77.58

Low-Pressure, 90 Degree Elbow Connector, 3/8 NPT Female

4452K413

Your reference:

Delivers tomorrow via freight

12 **316 Stainless Steel Threaded Pipe Fitting** — 1 Each — 12.37 Each — 12.37

Low-Pressure, Tee Connector, 3/8 NPT Female

4452K433

Your reference:

Delivers tomorrow 11 am - 1 pm

13 **Extreme-Temperature Air and Steam Hose**
316 Stainless Steel, 3/8 NPT Male x 37 Degree Flare UNF Female, 36" Long
5793T64
Your reference:
Length, in.
36
2 Each | 87.04 Each | 174.08

Delivers tomorrow via freight

14 **316 Stainless Steel Threaded Pipe Fitting**
Low-Pressure, Union Straight Connector, 3/8 NPT Female
4452K224
Your reference:
4 Each | 18.33 Each | 73.32

Delivers tomorrow via freight

15 **Strut-Mount Metal Routing Clamp**
316 Stainless Steel, 5/8" ID, 2-1/16" High
3115T94
Your reference:
10 Each | 4.12 Each | 41.20

Delivers tomorrow via freight

16 **Strut-Mount Metal Routing Clamp**
316 Stainless Steel, 3/4" ID, 1/16" Thick
3115T045
Your reference:
5 Each | 4.46 Each | 22.30

Delivers tomorrow 11 am - 1 pm

17 **Strut Channel**
Slotted Hole, 316 Stainless Steel, 8 Feet Length
33085T79
Your reference:
Length, ft.
8 ft.
4 Each | 118.94 Each | 475.76

Delivers tomorrow via freight

18 **Strut Channel Floor Mount**
for Standard Channel, Straight Post, 316 Stainless Steel, 4" Long
33145T14
Your reference:
10 Each | 137.98 Each | 1,379.80

Delivers tomorrow via freight

19	**Strut Channel Floor Mount** for Stacked Channel, Straight Post, 316 Stainless Steel, 6" Long 33145T42 Your reference:	2 Each	183.61 Each	367.22

Delivers tomorrow via freight

20	**Back-to-Back Stacked Strut Channel** Slotted Hole, 304 Stainless Steel, 1-5/8" Height, 10 Feet Length 3291T2 Your reference: **Length, ft.-in.** 10 ft.	1 Each	217.94 Each	217.94

Delivers tomorrow via freight

21	**Corrosion-Resistant 316/316L Stainless Steel Sheet** 24" x 24", 1/4" Thick 9195K23 Your reference:	1 Each	393.45 Each	393.45

Delivers tomorrow via freight

22	**316 Stainless Steel Stud Anchor for Concrete** 1/2" Diameter, 5-1/2" Long 97799A214 Your reference:	5 Packs of 10 each	108.10 Pack	540.50

Merchandise	5,171.74
Shipping	140.24
Tax	400.81
Total	**$5,712.79**

Contact
Contact

Delivery method
Ground
Tomorrow

Delivery address
W. M. Lyles Co
715 west 4th St
Beaumont CA 92223

Delivery attention:
Armando Cayama

Payment method
Invoice

Invoice / receipt preference
PO BOX 28130
acayama@wmlylesco.com

Billing address
W. M. Lyles Co
PO BOX 28130
Fresno CA 93729

Tax
Taxable

Southern Contracting Company
P.O. Box 445 San Marcos, CA 92079-0445
Tel 760-744-0760 Fax 760-744-6475
website: www.southerncontracting.com
email: info@southerncontracting.com

Change Order Request

103801 — Wastewater Treatment Plant Salt Mitigation Upgrade

COR Subject: CLAR-46 HP Washe System

To
Juan C. Ahumada
W.M. Lyles
42142 Roick Drive
Temecula, CA 92590
951-973-7393

Return To
Dan Alcantar
Southern Contracting Company
760-744-0760x621
619-778-0681
DAlcantar@southerncontracting.com

Contract No: **55.1173**
COR Number: **103801-COR#030**
COR Revision Number: **0**
COR Date: 7/19/2021
Work Type: Price / Do Not Proceed
Other Reference No: CLAR-046
Days Valid: **5**

Scope Of Work / Time Extension Request

The work associated with CLAR-046 HP wash System is a change to Southern Contracting Company's scope of work in which a change in Contract Price and Time is to be considered. Accordingly, Southern Contracting Company requests a Contract Change Order in the amount of $33,144.29

Scope of Work is as follows:
- Provide labor and materials to provide power to the HP wash System components.

The new booster pump (P-1471) will be powered and controlled by a 5 hp starter, installed as part of a new control Panel, CP-1471. The new fine screen spray motors (ME-1418 and ME-1428) will also be provided with 5 hp starters at CP-1471. Control panel CP-1471 will be located in the electrical building, as shown on drawing LE-01. CP-1471 will be powered from DP-HW2, utilizing a 30AT breaker, as shown on E-04 and E-12. Conduit P1471 (3/4-inch) 3#10 with #12 ground will be added to provide power from DP-HW2 to CP-1471. Spare conduit SP1412 will be repurposed as part of conduit P1471A from the starters in CP-1471 to HH-105. After exiting HH-105, conduit P1471A (1-inch, 9#10 with 3 #12 grounds) will power the new booster pump, P-1471, and the fine screen spray drives, ME- 1418 and ME-1428. See LE-05, CE-02, CE-03, CE-10, CE-11, CE-16 and CE-18. A 3/4-inch conduit (Shielded CAT6), F1471, will need to be added between CTC-HW and CP-1471 to provide communication for the new control panel. See CE-09.
New conduit C1471 has been designated for the control wires between CP-1471 and the new LCP located at the booster pump (LCP-1471). Spare conduit SP1422 will be repurposed as C1471+ and will be used to combine C1471 up to HH-105. Conduit C1471 will be routed from HH-105 to LCP-1471. This conduit will be 1-inch and contain 9 #12 wires with #12 ground (120VAC). See drawings CE-05, CE-06, CE-10, CE-16 and CE-18. One new LCP (LCPP-1471) with HOR and OCR switches for the booster pump motor and new solenoid valves (SV-1417 and SV-1427) will also be installed, as shown on LE-05. Conduits C1417 and C1427 will provide power and controls to SV-1417 and SV-1427 (2 #12, 120 VAC). New conduit C1418 (1-inch, 8 #12, intrinsically safe) has been added to provide control wiring from CP-1471 to the home and away switches for the fine screen spray bars. Spare conduit SP-1432 will be used to for C1418 from CP-

1471 to HH-105. See drawings CE-05, CE-10 and CE-18. The installation of the new booster pump will also require the addition of two new pressure gauges, one on the suction
line (PI-1470) and one on the discharge line (PI-1472). These will be the same make and model as other pressure gauges installed throughout the plant. See PI-05 and E-17.

Exclusions: Control Panels, Instrumentation, Installation of inline instrumentation, Set up of network and SCADA updates, programming, concrete, concrete pads, dry pack, digging, backfill, surface restoration, Overtime.

Change in time: 5 days

Southern Contracting reserves all rights to additional costs and time for changes not identified in the documents furnished, and is not responsible for additional costs or time for work which is not part of our contract scope of work, unless stipulated above. Should additional information or clarification be required, please contact me at your convenience.

Summary

Total: **$33,144.29**

Reservation of Rights

This COR does not include any amount for impacts such as interference, disruptions, rescheduling, changes in the sequence of work, delays and/or associated acceleration. We expressly reserve the right to submit our request for any of these items.

Signed By: 

Dated: 7/19/2021

Daniel Alcantar

PM

Bid Summary Report

103801 Beaumont Chang Orders Estimator: Dan Alcantar **Job #2336**

Job Name: 103801 Beaumont Chang Orders

Contractor:

Estimator: Dan Alcantar

Notes:

Bid Date:

Summary Description	Material			Labor		
	Extended	%	Adjusted	Extended	%	Adjusted
COR#030 CLAR-046 HP wash System	$12,661.25	100.00%	$12,661.25	142.04	100.00%	142.04

Top Sheet

Raw Cost		$27,554.52	Sales per Month	$0.00
Tax		$981.25	Return per Month	$0.00
Raw Cost with Tax		$28,535.77	Price per Square Foot	$0.00
Overhead		$4,280.36	Hours per Square Foot	0.00
Profit		$0.00	Square Feet	0.00
Total Return Amount		$4,280.36	Job Months	0.00
Total Return %		12.91%	Hours per Week	0.00
Price		$32,816.13	Workers per Day	0.00
Bond		$328.16	Total Hours	142.04
Sell Price		**$33,144.29**	Markup Sales Tax (Overhead)	Yes
Adjusted Sell ()		$0.00	Markup Sales Tax (Profit)	Yes
Adjusted Sell Return	0.00 %	$0.00	Use Bond Table	Yes

Labor

Class Description	Percent of Total	Hours Distributed	Hourly Rate	Burden Rate	Burden Percent	Labor Cost
Journeyman	100.00%	142.04	$85.51	$0.00	0.00%	$12,146.27
Totals	100.00%	142.04	$85.51	$0.00	0.00%	$12,146.27

Mark Ups

	Total		OVERHEAD %		OVERHEAD Amount		PROFIT %	PROFIT Amount
Materials	$12,661.25	+	15.00%	+	$14,560.44	+	0.00%	$14,560.44
Labor	$12,146.27	+	15.00%	+	$13,968.21	+	0.00%	$13,968.21
Supplier Quotes	$0.00	+	15.00%	+	$0.00	+	0.00%	$0.00
SubContractors	$0.00	+	5.00%	+	$0.00	+	0.00%	$0.00
Direct Job Expense	$2,747.00	+	15.00%	+	$3,159.05	+	0.00%	$3,159.05

Bid Summary Report

103801 Beaumont Chang Orders **Estimator: Dan Alcantar** **Job #2336**

Equipment Rental	$0.00	+ 15.00%	$0.00	+ 0.00%	$0.00
Totals	**$27,554.52**	**15.00%**	**$31,687.70**	**0.00%**	**$31,687.70**

Tax Report

	Taxed Amount	Tax Rate %	Tax Amount
Materials	$12,661.25	7.75%	$981.25
Labor	$12,146.27	0.00%	$0.00
Supplier Quotes	$0.00	0.00%	$0.00
SubContractors	$0.00	0.00%	$0.00
Direct Job Expense	$0.00	0.00%	$0.00
Equipment Rental	$0.00	0.00%	$0.00
		Total Tax:	$981.25

Direct Job Expense

Name	Supplier	Tax (0.0 %)	Unit Cost	Multiplier	Amount
Truck		No	$27.47	100.00	$2,747.00
				Total:	$2,747.00

Item #	Item Name	Quantity	Unit Price	U	Ext Price	Unit Labor	U	Ext Labor
Label Set: Combined, Combined, Combined, Combined, Combined					**$12,661.25**			**142.04**
Cost Code: 010 - Conduit/Raceway					$2,069.84			18.00
1,134	3/4 GRC	30.00	$360.05	C	$108.01	6.00	C	1.80
1,974	1-3/4 REDUCING BUSHING	8.00	$375.69	C	$30.06	20.00	C	1.60
2,536	1 5/8 KINDORF-SLOTTED HDG	10.00	$460.00	C	$46.00	11.00	C	1.10
2,677	1 5/8 STRUT-STAINLESS	20.00	$1,187.50	C	$237.50	15.00	C	3.00
2,703	3/4 GRC/PVC COATED	40.00	$474.52	C	$189.81	8.00	C	3.20
2,704	1 GRC/PVC COATED	20.00	$614.33	C	$122.87	10.00	C	2.00
2,811	1 GRC/PVC HUB	4.00	$51.43	E	$205.74	50.00	C	2.00
3,101	3/4 GRC/PVC C105 STRP	10.00	$253.52	C	$25.35	3.00	C	0.30
3,102	1 GRC/PVC C105 STRP	20.00	$278.52	C	$55.70	3.00	C	0.60
3,977	1/2" FLEX WP OCAL STR CONN	20.00	$52.44	E	$1,048.80	12.00	C	2.40
Cost Code: 020 - Wire/Cable					$3,714.21			108.04
4	16 TSP - SHIELDED CABLE BELDEN	1,000.00	$720.00	M	$720.00	10.00	M	10.00
44	12 THHN CU STRANDED	8,850.00	$175.24	M	$1,550.86	6.00	M	53.10
45	10 THHN CU STRANDED	3,750.00	$267.99	M	$1,004.95	7.50	M	28.13
749	CAT6E CABLE	100.00	$950.00	M	$95.00	25.00	M	2.50
750	CAT6 TERMINATION	2.00	$6.60	E	$13.20	0.25	E	0.50
4,151	16 GA TERMINATION	12.00	$300.00	C	$36.00	0.12	E	1.44
4,153	12 GA TERMINATION	48.00	$110.00	C	$52.80	0.15	E	7.20
4,154	10 GA TERMINATION	24.00	$110.00	C	$26.40	0.18	E	4.32
60,050	Wire Tags Tube Style	86.00	$250.00	C	$215.00	1.00	C	0.86
Cost Code: 060 - Hazardous Systems					$6,877.20			16.00
3,886	1/2" EP PROOF FLEX 18"	20.00	$343.86	E	$6,877.20	0.80	E	16.00
[Items and ByProducts] Total:					**$12,661.25**			**142.04**

CITY OF BEAUMONT WASTEWATER TREATMENT PLANT
SALT MITIGATION UPGRADE PROJECT

CLARIFICATION 46

To (Construction Manager):	Stantec Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com
From (Engineer):	AQUA Engineering Attention: Boris Petkovic Phone: 801-683-3734 Email: boris.petkovic@aquaeng.com
Subject: Fine Screens Water Booster Pumps	**Location:** Fine Screens Area
Reference Documents: Drawing Nos. FSM-1, FSM-2, PI-05, LE-01, LE-05, E-04, E-12, E-17, CE-02, CE-03, CE-05, CE-06, CE-08, CE-09, CE-10, CE-11, CE-16, CE-18	

CLARIFICATION

Note the following:

An optional high-pressure wash system will be installed at the two existing fine screens to minimize the time required for manual washing by plant staff. Huber Technology will provide the required internal screen components, booster pump (P-1471), associated solenoid valves (SV-1417 and SV-1427) and labor required to install the internal screen components. The supply and discharge piping and misc. valves, instrumentation, pump and pipe supports shall be provided and installed by the contractor as indicated in the attached FSM-1 and -2 drawings.

The new booster pump (P-1471) will be powered and controlled by a 5 hp starter, installed as part of a new control panel, CP-1471. The new fine screen spray motors (ME-1418 and ME-1428) will also be provided with 5 hp starters at CP-1471. Control panel CP-1471 will be located in the electrical building, as shown on drawing LE-01. CP-1471 will be powered from DP-HW2, utilizing a 30AT breaker, as shown on E-04 and E-12. Conduit P1471 (3/4-inch) 3#10 with #12 ground will be added to provide power from DP-HW2 to CP-1471. Spare conduit SP1412 will be repurposed as part of conduit P1471A from the starters in CP-1471 to HH-105. After exiting HH-105, conduit P1471A (1-inch, 9#10 with 3 #12 grounds) will power the new booster pump, P-1471, and the fine screen spray drives, ME-1418 and ME-1428. See LE-05, CE-02, CE-03, CE-10, CE-11, CE-16 and CE-18.

A 3/4-inch conduit (Shielded CAT6), F1471, will need to be added between CTC-HW and CP-1471 to provide communication for the new control panel. See CE-09.

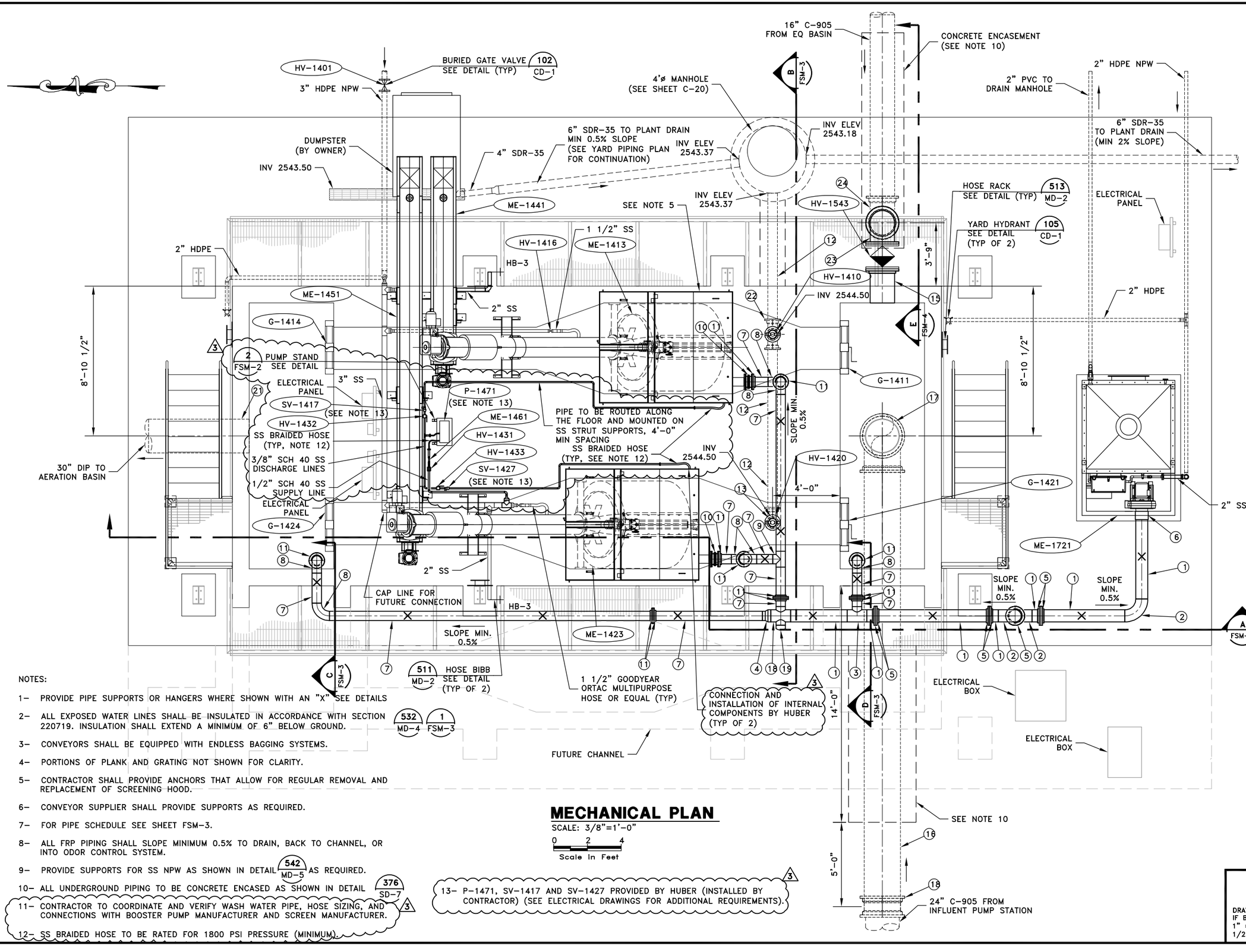
New conduit C1471 has been designated for the control wires between CP-1471 and the new LCP located at the booster pump (LCP-1471). Spare conduit SP1422 will be repurposed as C1471+ and will be used to combine C1471 up to HH-105. Conduit C1471 will be routed from HH-105 to LCP-1471. This conduit will be 1-inch and contain 9 #12 wires with #12 ground (120VAC). See drawings CE-05, CE-06, CE-10, CE-16 and CE-18. One new LCP (LCP-P-1471) with HOR and OCR switches for the booster pump motor and new solenoid valves (SV-1417 and SV-1427) will also be installed, as shown on LE-05. Conduits C1417 and C1427 will provide power and controls to SV-1417 and SV-1427 (2 #12, 120 VAC).

New conduit C1418 (1-inch, 8 #12, intrinsically safe) has been added to provide control wiring from CP-1471 to the home and away switches for the fine screen spray bars. Spare conduit SP-1432 will be used to for C1418 from CP-1471 to HH-105. See drawings CE-05, CE-10 and CE-18.

The installation of the new booster pump will also require the addition of two new pressure gauges, one on the suction line (PI-1470) and one on the discharge line (PI-1472). These will be the same make and model as other pressure gauges installed throughout the plant. See PI-05 and E-17.

CITY OF BEAUMONT WASTEWATER TREATMENT PLANT
SALT MITIGATION UPGRADE PROJECT

Prepared By (Name): Boris Petkovic, AQUA Engineering; Lindsey Stevens, SKM Engineering	**Date**: 6/29/2021
Distributed By:	**Date**:



NOTES:

1– PROVIDE PIPE SUPPORTS OR HANGERS WHERE SHOWN WITH AN "X" SEE DETAILS

2– ALL EXPOSED WATER LINES SHALL BE INSULATED IN ACCORDANCE WITH SECTION 220719. INSULATION SHALL EXTEND A MINIMUM OF 6" BELOW GROUND.

3– CONVEYORS SHALL BE EQUIPPED WITH ENDLESS BAGGING SYSTEMS.

4– PORTIONS OF PLANK AND GRATING NOT SHOWN FOR CLARITY.

5– CONTRACTOR SHALL PROVIDE ANCHORS THAT ALLOW FOR REGULAR REMOVAL AND REPLACEMENT OF SCREENING HOOD.

6– CONVEYOR SUPPLIER SHALL PROVIDE SUPPORTS AS REQUIRED.

7– FOR PIPE SCHEDULE SEE SHEET FSM-3.

8– ALL FRP PIPING SHALL SLOPE MINIMUM 0.5% TO DRAIN, BACK TO CHANNEL, OR INTO ODOR CONTROL SYSTEM.

9– PROVIDE SUPPORTS FOR SS NPW AS SHOWN IN DETAIL 542 MD-5 AS REQUIRED.

10– ALL UNDERGROUND PIPING TO BE CONCRETE ENCASED AS SHOWN IN DETAIL 376 SD-7

11– CONTRACTOR TO COORDINATE AND VERIFY WASH WATER PIPE, HOSE SIZING, AND CONNECTIONS WITH BOOSTER PUMP MANUFACTURER AND SCREEN MANUFACTURER. 3

12– SS BRAIDED HOSE TO BE RATED FOR 1800 PSI PRESSURE (MINIMUM).

13– P-1471, SV-1417 AND SV-1427 PROVIDED BY HUBER (INSTALLED BY CONTRACTOR) (SEE ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS). 3

MECHANICAL PLAN

SCALE: 3/8"=1'-0"

0 2 4
Scale in Feet

ORIGINAL	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	DPS	BDP	JRL
REVISIONS				
1	11/15/18	DPS	KRB	JRL
2	10/11/19	DPS	BDP	JRL
3	06/18/21	SSB	BDP	JRL

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
FINE SCREENS
MECHANICAL PLAN

AQUA ENGINEERING
533 W. 2600 S. SUITE 275, BOUNTIFUL, UT 84010
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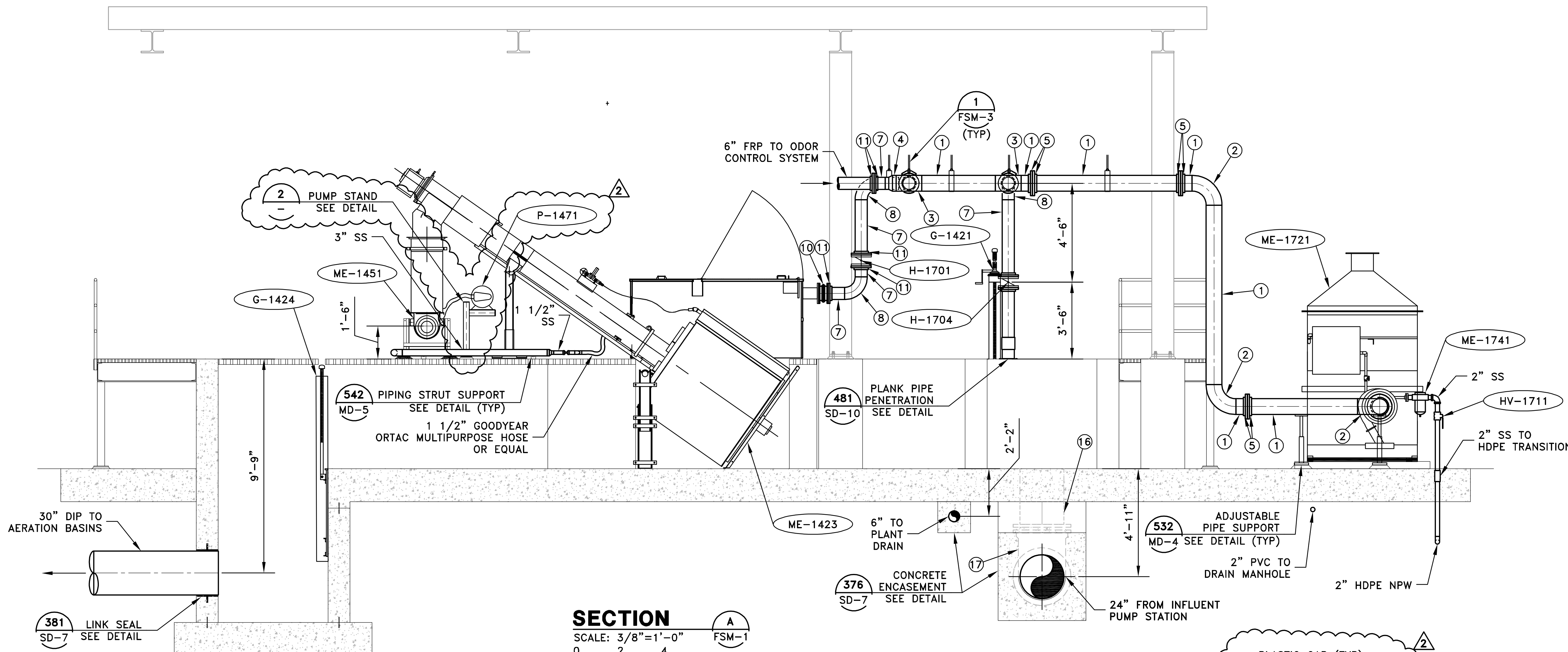
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
PH. (951) 686-1070
FAX (951) 788-1256

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

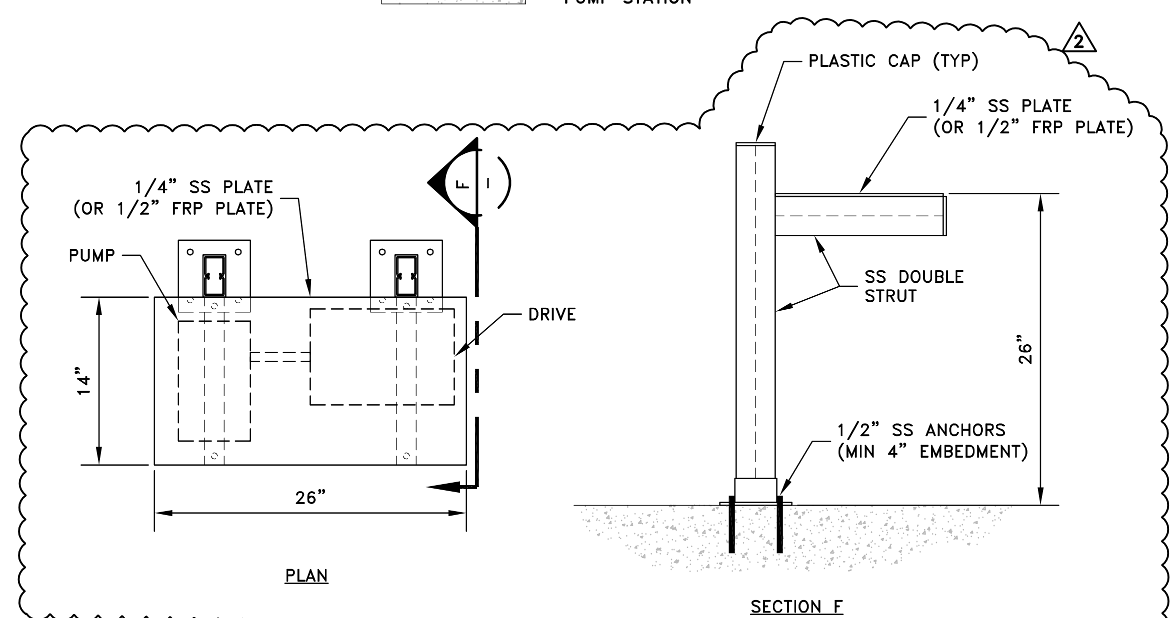
SHEET
FSM-1



SECTION A FSM-1

SCALE: 3/8"=1'-0"

0 2 4 Scale in Feet



PUMP STAND 2

SCALE: NTS

NOTES:

1- FOR PIPE SCHEDULE SEE SHEET FSM-3.

2- CONTRACTOR TO COORDINATE AND VERIFY WASH WATER PIPE, HOSE SIZING, AND CONNECTIONS WITH BOOSTER PUMP MANUFACTURER AND SCREEN MANUFACTURER.

3- SS BRAIDED HOSE TO BE RATED FOR 1800 PSI PRESSURE (MINIMUM).

4- P-1471, SV-1417 AND SV-1427 PROVIDED BY HUBER (INSTALLED BY CONTRACTOR) (SEE ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS).

KRB 11/27/2018 X:\Beaumont\Salt Mitigation WWTP Upgrade WEBB170227\Drafting\FINE SCREENS\FSM-2.dwg

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	DPS	BDP	JRL
REVISIONS				
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2	06/18/21	SSB	BDP	JRL

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
FINE SCREENS
MECHANICAL SECTIONS

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ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
CIVIL ENGINEERS

0 1/2 1

DRAWING IS TO SCALE IF BAR MEASURES:
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SHEET

FSM-2

SCADA

RIO-HW

ELECTRICAL EQUIPMENT

FIELD

PLC-1413

PLC-1433

PLC-1423

PLC-1413

1 FINE SCREEN 1 UPSTREAM LEVEL LI 1412A

1 FINE SCREEN 1 DOWNSTREAM LEVEL LI 1412B

1 FINE SCREEN 1 HIGH LEVEL HIGH PILOT LIH 1412

1 FINE SCREEN 1 CONTROL POWER ON ZI 1413A

1 FINE SCREEN 1 AUTO ZI 1413B

1 FINE SCREEN 1 RESET ZI 1413C

1 FINE SCREEN 1 CONTROL POWER ENABLE ZC 1413

1 FINE SCREEN 1 SCREEN FAULT YA 1413A

1 FINE SCREEN 1 SCREEN FAULT YA 1413B

1 FINE SCREEN 1 CURRENT ALARM HIGH IAH 1413

1 FINE SCREEN 1 MOTOR TEMP ALARM HIGH TAH 1413

1 FINE SCREEN 1 RUNNING YI 1413

1 FINE SCREEN 1 FORWARD COMMAND YC 1413A

1 FINE SCREEN 1 REVERSE COMMAND YC 1413B

PRESS ZONE WASH VALVES OPEN ZCO 1416A

SPRAY BAR WASH VALVES OPEN ZCO 1416B

WASH NUMBER 1 WASH VALVES OPEN ZCO 1416C

1 FINE SCREEN 1 SPEED SI 1413

1 FINE SCREEN 1 SPEED CONTROL SC 1413

CONVEYOR 3 REMOTE ZI 1461A

CONVEYOR 3 PULL CORD ZI 1461B

CONVEYOR 3 FAIL YA 1461

CONVEYOR 3 RUNNING YI 1461

CONVEYOR 3 START COMMAND YC 1461

CONVEYOR 3 SPEED SWITCH ALARM LOW SAL 1461

CONVEYOR 2 REMOTE ZI 1451A

CONVEYOR 2 PULL CORD ZI 1451B

CONVEYOR 2 FAIL YA 1451

CONVEYOR 2 RUNNING YI 1451

CONVEYOR 2 START COMMAND YC 1451

CONVEYOR 2 SPEED SWITCH ALARM LOW SAL 1451

CONVEYOR 1 REMOTE ZI 1441A

CONVEYOR 1 PULL CORD ZI 1441B

CONVEYOR 1 FAIL YA 1441

CONVEYOR 1 RUNNING YI 1441

CONVEYOR 1 START COMMAND YC 1441

CONVEYOR 1 SPEED SWITCH ALARM LOW SAL 1441

POWER YL W

RUNNING YL G

O.L. YL A

LAH YL A

ESTOP HS 1413D

RESET HS 1413E

VFD

CP-ME-1413/PLC-1413

480VAC

RESET HS 1461 RUN YL G

FAIL YA A

KQI 1461

FVNR-ME-1461

480VAC

HOR HS 1461

LCP-ME-1461

RESET HS 1451 RUN YL G

FAIL YA A

KQI 1451

FVNR-ME-1451

480VAC

HOR HS 1451

LCP-ME-1451

RESET HS 1441 RUN YL G

FAIL YA A

KQI 1441

FVNR-ME-1441

480VAC

HOR HS 1441

LCP-ME-1441

TYPICAL OF 2 FINE SCREENS AND 1 FUTURE FINE SCREEN

CP-1471

480VAC

HOA HS 1471 OCR HS 1412 OCR HS 1422 OCR HS 1437

LCP-1471

OCR HS 1416A OCR HS 1416B OCR HS 1416C OCR HS 1416D OCR HS 1416E HOA HS 1413A FOR HS 1413B ESTOP HS 1413C

LCP-ME-1413

LDIT 1412

120VAC

2

FROM NPW 3" HV-1401

3" HV-1470

PI 1470

PI 1472

M P-1471

3" HV-1417 SV-1417

3" HV-1437 SV-1437 TO FINE SCREEN 3 SPRAY DRIVE (IDENTICAL EQUIPMENT NOT SHOWN)

3" HV-1427 SV-1427 TO FINE SCREEN 2 SPRAY DRIVE (IDENTICAL EQUIPMENT NOT SHOWN)

1-1/2" HV-1416 TO FINE SCREEN 2 SOLENOID VALVES (IDENTICAL EQUIPMENT NOT SHOWN)

1-1/2" HV-1425 TO FINE SCREEN 3 SOLENOID VALVES (IDENTICAL EQUIPMENT NOT SHOWN)

1-1/2"

S SV-1416E

S SV-1416D

S SV-1416C

S SV-1416B

S SV-1416A

1.25" 1.25" 1" 1"

H-1701

2

6" TSH 1413

M ME-1418 SPRAY DRIVE

AWAY ZS 1418B HOME ZS 1418A

LE 1412A

LE 1412B

FINE SCREEN 1 ME-1413 VENDOR PACKAGE

TO FINE SCREEN ODOR CONTROL SYSTEM L64 PI-25

H-1702 6" FROM FINE SCREEN 2

H-1705 6" FROM FUTURE FINE SCREEN 3

H-1703 6"

H-1704 6"

FROM INFLUENT PUMP STATION L1 PI-04 24"

FINE SCREEN SPLITTER BOX

G-1411

G-1421

G-1431

TO FINE SCREEN 2 (IDENTICAL EQUIPMENT NOT SHOWN) 6"

TO FUTURE FINE SCREEN 3 (IDENTICAL EQUIPMENT NOT SHOWN) 6"

HV-1430

HV-1420

HV-1410

TO INFLUENT PUMP STATION L11 PI-04

FROM EQ BASIN PUMP STATION L3 PI-04A 16"

G-1414

TO ANOXIC BASIN SPLITTER BOX L1 PI-06 24"

FROM FINE SCREEN 2 (IDENTICAL EQUIPMENT NOT SHOWN)

G-1424

FROM FUTURE FINE SCREEN 3 (IDENTICAL EQUIPMENT NOT SHOWN)

G-1434

FINE SCREEN EFFLUENT BOX

FROM FINE SCREEN 2 (IDENTICAL EQUIPMENT NOT SHOWN)

FROM FUTURE FINE SCREEN 3 (IDENTICAL EQUIPMENT NOT SHOWN)

SSL 1441 M ZS 1441B CONVEYOR 1 ME-1441

SSL 1451 M ZS 1451B CONVEYOR 2 ME-1451

SSL 1461 M ZS 1461B CONVEYOR 3 ME-1461

FINE SCREENS 1, 2, & (3 FUTURE)
ME-1413, ME-1423, (ME-1433)
CONVEYORS 1, 2, & (3 FUTURE)
ME-1441, ME-1451, (ME-1461)
NPW BOOSTER PUMP: P-1471
2 FINE SCREEN SPRAY DRIVE 1-3: ME-1418, ME-1428 (ME-1438 FUTURE)
LOOPS: 1412, 1413, 1416, 1422, 1423,
1426, (1432, 1433, 1436), 1441, 1451, (1461) 1417, 1418, 1427, 1428, (1437, 1438) 1471 2

NOTES:
1 ITEMS THAT ARE RED ON THIS SHEET ARE SUPPLIED BY THE FINE SCREEN MANUFACTURER. IF THIS NOTE IS NOT IN RED THIS DRAWING HAS NOT BEEN COPIED IN COLOR.

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

1	11/26/18	MPJ	BB	MPJ
2	10/11/19	MPJ	DCL	MPJ
3	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
INSTRUMENTATION - P&IDS
FINE SCREENS

AQUA ENGINEERING
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RIVERSIDE, CA 92506
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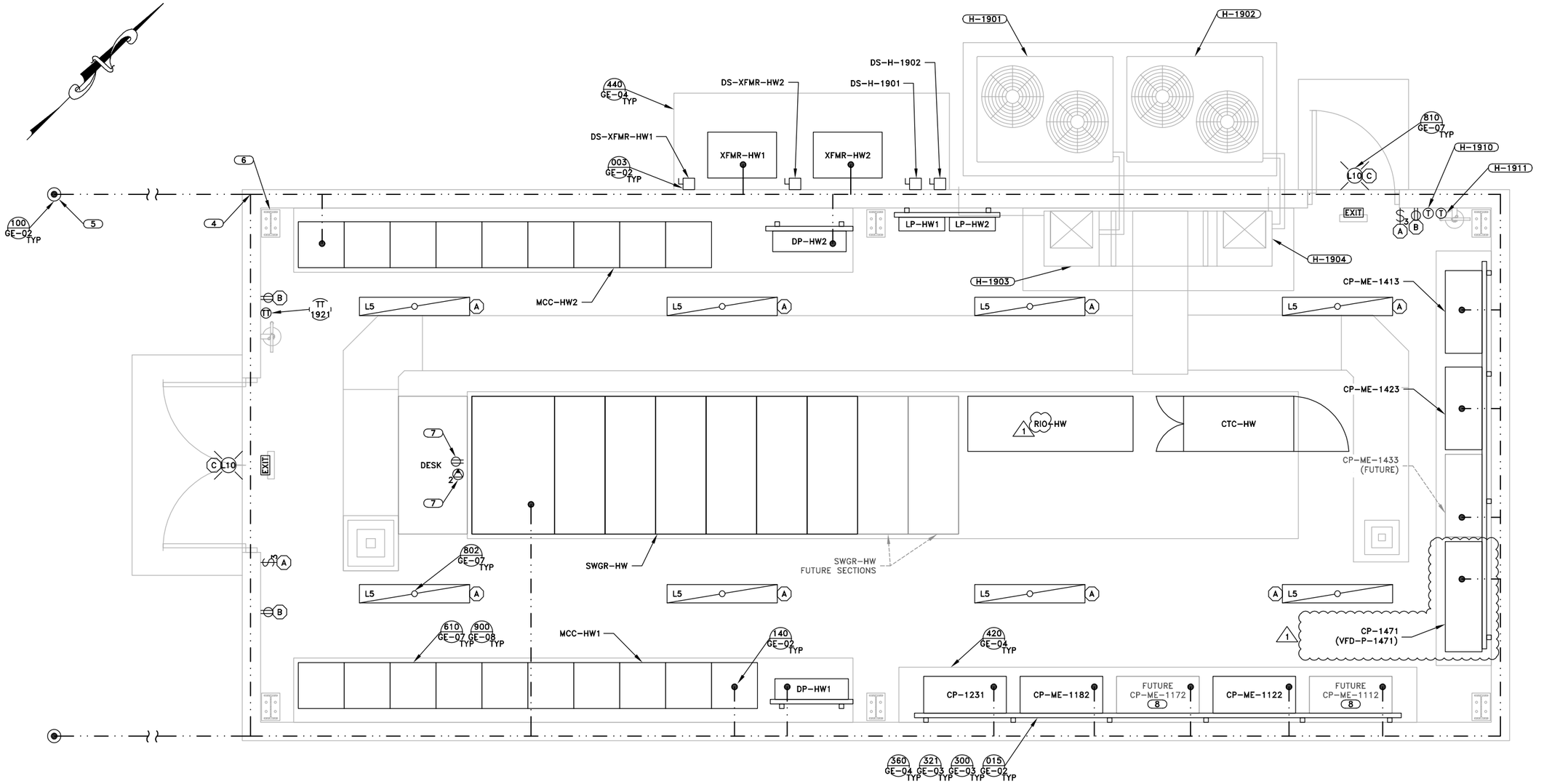
FAX (951) 788-1256

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

SHEET 9 OF 172

PI-05

6/17/2021 C:\USERS\DANIEL.LEAVITT\AQUA ENGINEERING\BEAUMONT - DOCUMENTS\WEBB170227 SALT MITIGATION WWTP UPGRADE\050 DRAFTING\9997 ELECTRICAL\01 PI-05 FINE SCREENS.DWG



NOTES:

1. CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY. ALL EXPOSED CONDUIT SHALL BE GALVANIZED RIGID STEEL (GRS). PANELS SHALL BE STAINLESS STEEL NEMA 4.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN IN AUTOCAD FORMAT TO THE ELECTRICAL ENGINEER FOR APPROVAL.
3. LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.
4. CONTRACTOR SHALL PROVIDE 2 CONCRETE ENCASED ELECTRODES IN FOOTINGS PER SPECIFICATIONS 60' PER CONDUCTOR.
5. CONTRACTOR SHALL INSTALL (2) 10'X3/4"ø COPPER GROUND RODS 10' MINIMUM SPACING AND 10' MINIMUM FROM BUILDING.
6. BOND ALL BUILDING STEEL TO GROUND PER NEC.
7. FLOOR MOUNTED OUTLETS.
8. ALLOCATE SPACE AND ROUTE CONDUITS FOR EXISTING SCREEN 1 AND WASHPACTOR 1. THE EXISTING PANELS ARE CURRENTLY ADJACENT TO THE EQUIPMENT AT THE HEADWORKS BUT IF IT IS EVER REPLACED IT WOULD BE RELOCATED TO THIS LOCATION.

ELECTRICAL BUILDING PLAN

1/2" = 1'-0"

0 2 4

Scale in Feet

ELECTRICAL LEGEND

L5 — H.E. WILLIAMS 39W LED 1'X4' FIXTURE WITH EMERGENCY AND DIMMING DRIVERS. MODEL ATS1-14-L40/840-D-EM/10WLP-DIM-UNV OR APPROVED EQUAL

L10 — MAXLITE LED FULL CUTOFF 40W WALL LIGHT (WALL PACK) WITH PHOTOCELL CONTROL. MODEL MLLWP40LED50DSPC12 OR APPROVED EQUAL.

EXIT — DAY-BRITE VE SERIES EXIT SIGN. MODEL VEGW OR APPROVED EQUAL.

DUPLEX OUTLET
G: GFCI PROTECTED OUTLET
WP: WEATHER-PROOF OUTLET GFCI PROTECTED.

2 — DATA OUTLET (2 PORT ETHERNET JACK W/ 2 PORT TELEPHONE

A — DEVICES WITH SAME LETTER CODE (I.E. A,B,C) REPRESENT DEVICES ON SAME CIRCUIT.

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	09/05/18	MPJ	DCL	MPJ
REVISIONS				
1	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - LAYOUT
ELECTRICAL BUILDING PLAN

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
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ENGINEERING CONSULTANTS

0 1/2 1

DRAWING IS TO SCALE
IF BAR MEASURES:
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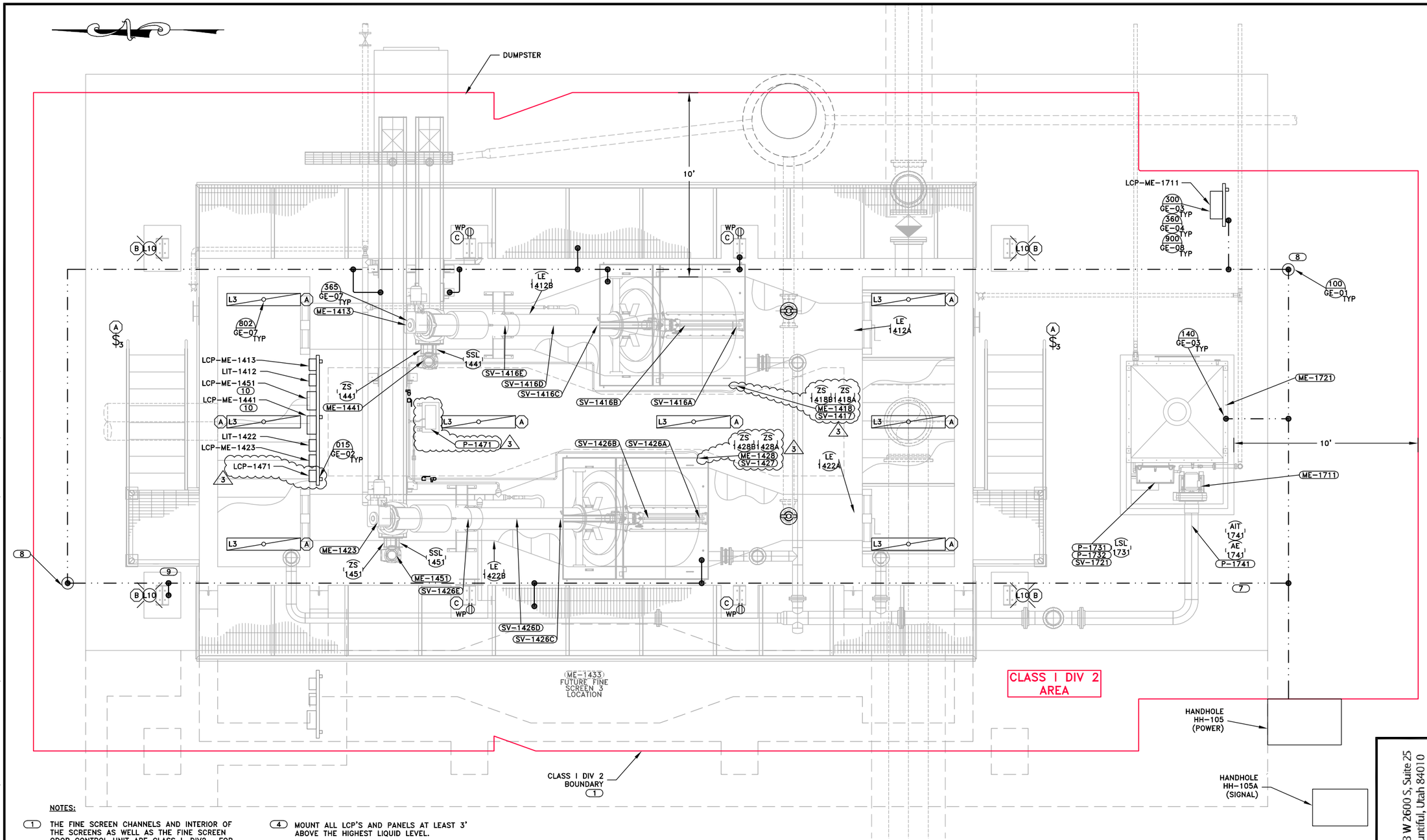
1/2" = HALF SCALE

SHEET 94 OF 172

LE-01



NOTES:

1. THE FINE SCREEN CHANNELS AND INTERIOR OF THE SCREENS AS WELL AS THE FINE SCREEN ODOR CONTROL UNIT ARE CLASS I, DIV2. FOR ELECTRICAL COMPONENTS IN THIS CLASSIFIED AREA, ALL COMPONENTS SHALL BE RATED CLASS I, DIV 2 AND SEAL OFFS SHALL BE UTILIZED PER THE REQUIREMENTS OF NEC. FOR THE UNCLASSIFIED SPACE SURROUNDING THIS AREA, ALL COMPONENTS SHALL BE CORROSION RESISTANT AND PANELS SHALL BE 316SS NEMA 4X. ALL EXPOSED CONDUITS AND FITTINGS SHALL BE PVC COATED GRS. ALL CHANNEL, ANCHORS, FASTENERS AND ASSOCIATED HARDWARE SHALL BE 316SS. CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN IN AUTOCAD FORMAT TO THE ELECTRICAL ENGINEER FOR APPROVAL.
3. LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.
4. MOUNT ALL LCP'S AND PANELS AT LEAST 3' ABOVE THE HIGHEST LIQUID LEVEL.
5. ALL ELECTRONIC DISPLAYS SUBJECT TO OUTDOOR EXPOSURE SHALL BE PROTECTED AS PER DETAIL 901.
6. CONTRACTOR TO KEEP APPROPRIATE SEPARATION BETWEEN 480VAC, 120VAC AND 24VDC IN ALL JUNCTION AND PULL BOXES.
7. CONTRACTOR SHALL PROVIDE 2 CONCRETE ENCASED ELECTRODES IN FOOTINGS PER SPECIFICATIONS 60' PER CONDUCTOR.
8. CONTRACTOR SHALL INSTALL (2) 10'X3/4"ø COPPER GROUND RODS 10' MINIMUM SPACING AND 10' MINIMUM FROM BUILDING.
9. BOND ALL BUILDING STEEL TO GROUND PER NEC.
10. LCP SHALL BE NEMA 4X DISCONNECT SWITCH WITH HOR SWITCH. LCP SHALL BE A MINIMUM OF 12"X6"X6".

FINE SCREENS ELECTRICAL PLAN

3/8" = 1'-0"

0 2 4

Scale in Feet

ELECTRICAL LEGEND

- L3 — DAY-BRITE 49W 1'X4' WET LOCATION LED FIXTURE MODEL DWAE43L840-4-UNV OR APPROVED EQUAL
- L10 — MAXLITE LED FULL CUTOFF 40W WALL LIGHT (WALL PACK) WITH PHOTO CELL CONTROL. MODEL MLLWP40LED50DSPC12 OR APPROVED EQUAL.
- DUPLEX OUTLET G: GFCI PROTECTED OUTLET WP: WEATHER-PROOF OUTLET GFCI PROTECTED.
- (A) — DEVICES WITH SAME LETTER CODE (I.E. A,B,C) REPRESENT DEVICES ON SAME CIRCUIT.

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	09/05/18	MPJ	DCL	MPJ
REVISIONS				
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3	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - LAYOUT
FINE SCREENS ELECTRICAL PLAN

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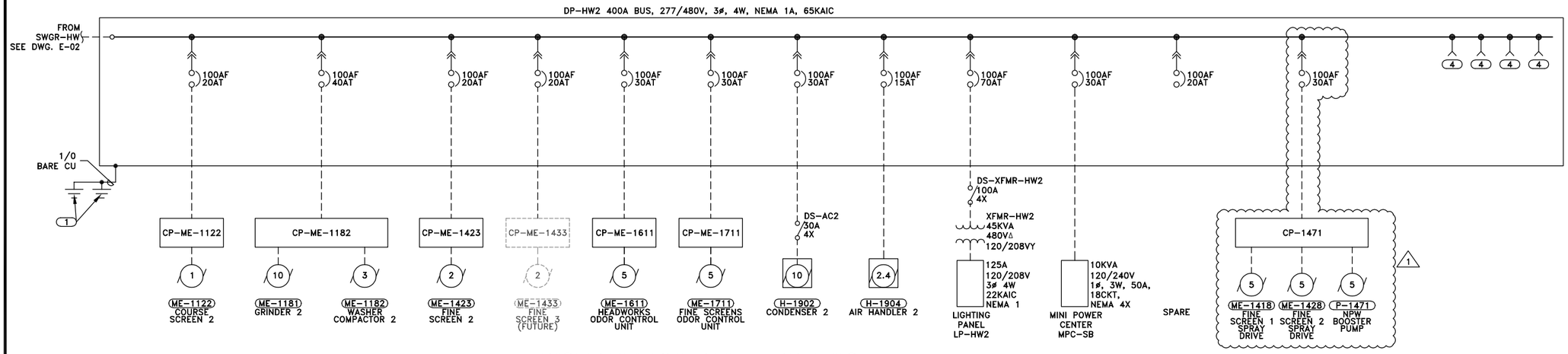
0 1/2 1

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

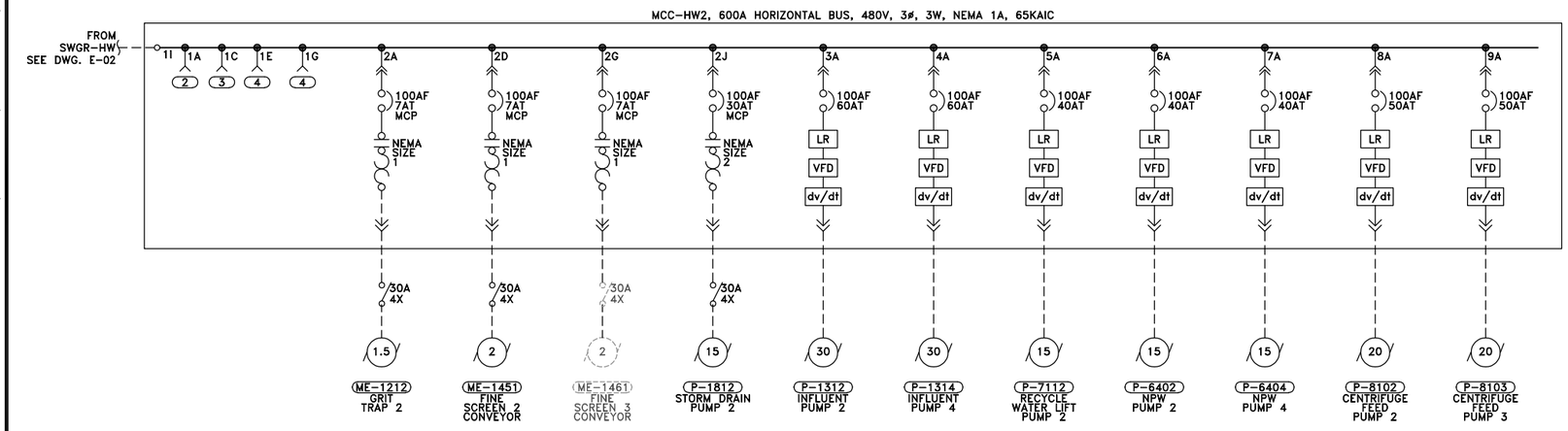
SHEET 98 OF 172

LE-05

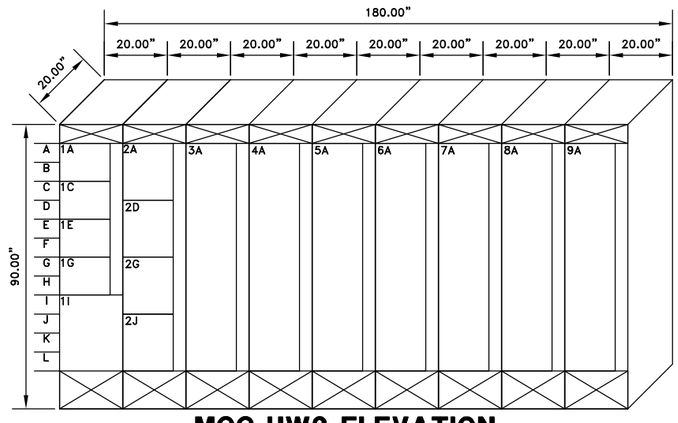
6/29/2021 C:\USERS\DANIEL.LEAVITT\AQUA ENGINEERING\BEAUMONT - DOCUMENTS\WEBB170227 SALT MITIGATION WWTP UPGRADE\050 DRAFTING\997 ELECTRICAL\13 LE-05 FINE SCREENS ELECTRICAL PLAN.DWG



DISTRIBUTION PANEL DP-HW2

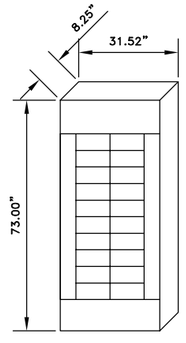


MOTOR CONTROL CENTER MCC-HW2 ONELINE DIAGRAM



MCC-HW2 ELEVATION

SCALE: 1/2" = 1'-0



DP-HW2 ELEVATION

SCALE: 1/2" = 1'-0

NOTES:

1. GROUND GRID
2. ETHERNET SWITCH
3. ETHERNET POWER SUPPLY
4. SPACE FOR FUTURE VFD, STARTER OR FEEDER BREAKER.

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	09/05/18	MPJ	DCL	MPJ
REVISIONS				
1	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - POWER DISTRIBUTION
MCC-HW2 ONELINE

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

SHEET 120 OF 172

E-04

6/25/2021 C:\USERS\DANIEL.LEAVITT\AQUA ENGINEERING\BEAUMONT - DOCUMENTS\WEBB170227 SALT MITIGATION WWTP UPGRADE\050 DRAFTING\997 ELECTRICAL\14 E-04 MCC-HW2 ONELINE.DWG

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
DP-HW1			144.6
DP-HW2			139.7
MCC-HW1			179.8
MCC-HW2			155.4
SOLIDS HOLDING TANK BLOWER 1 ME-6401		75.0	96.0
SOLIDS HOLDING TANK BLOWER 2 ME-6402		75.0	96.0
SOLIDS HOLDING TANK BLOWER 3 ME-6403		75.0	*
NON-MOTOR LOADS			
MCC-UV			154.7
UV TRAIN 1	86.6		104.3
SUBTOTAL			1070.5
+ 25% OF LARGEST MOTOR			45.0
TOTAL AMPS @ 480V/3PHASE			1115.4
SERVICE SIZE (AMPS)			1600.0

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SWGR-HW LOAD CALCULATIONS

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
GRIT TRAP 1		1.5	3.0
INFLUENT PUMP 1 P-1311		30.0	40.0
INFLUENT PUMP 3 P-1313		30.0	40.0
INFLUENT PUMP 5 P-1315		30.0	*
FINE SCREEN 1 CONVEYOR ME 1441		2.0	3.4
FINE SCREEN 3 CONVEYOR (FUTURE) ME-1461		2.0	3.4
NPW PUMP 1 P-6401		15.0	21.0
NPW PUMP 3 P-6403		15.0	21.0
RECYCLED WATER LIFT PUMP 1 P 7111		15.0	21.0
RECYCLED WATER LIFT PUMP 3 P-7113		15.0	*
CENTRIFUGE FEED PUMP 1 P-8101		20.0	27.0
SUBTOTAL			179.8
+ 25% OF LARGEST MOTOR			10.0
TOTAL AMPS @ 480V/3PHASE			189.8
SERVICE SIZE (AMPS)			400.0

MCC-HW1 LOAD CALCULATIONS

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
GRIT TRAP 2 ME-1212		1.5	3.0
INFLUENT PUMP 2 P-1312		30.0	40.0
INFLUENT PUMP 4 P-1314		30.0	40.0
FINE SCREEN 2 CONVEYOR ME-1451		2.0	3.4
NPW PUMP 2 P-6402		15.0	21.0
NPW PUMP 4 P-6404		15.0	*
RECYCLED WATER LIFT PUMP 2 P-7112		15.0	21.0
CENTRIFUGE FEED PUMP 2 P-8102		20.0	27.0
CENTRIFUGE FEED PUMP 3 P 8103		20.0	*
SUBTOTAL			155.4
+ 25% OF LARGEST MOTOR			10.0
TOTAL AMPS @ 480V/3PHASE			165.4
SERVICE SIZE (AMPS)			400.0

MCC-HW2 LOAD CALCULATIONS

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MCC UV MOTOR LOADS			
UV SPLITTER BOX MIXER ME-6103		7.5	11.0
TROLLEY HOIST 2		0.0	0.0
TROLLEY HOIST 1		0.0	0.0
WEIR GATE 1 G-6101		0.5	0.0
WEIR GATE 2 G-6102		0.5	0.0
WEIR GATE 3 G-6201		0.5	1.1
WEIR GATE 4 G-6202		0.5	1.1
WEIR GATE 5 G-6301		0.5	1.1
NON-MOTOR LOADS			
UV TRAIN 2	86.6		104.3
LP-D XFMR	30.0		36.1
SUBTOTAL			154.7
+ 25% OF LARGEST MOTOR			2.8
TOTAL AMPS @ 480V/3PHASE			157.5
SERVICE SIZE (AMPS)			400.0

MCC-UV (EXISTING) LOAD CALCULATIONS

PANEL: DP-HW1 | VOLTAGE: 277/480V | MAIN CB: NONE | BUS AMPS: 400 AMP
CB TYPE: BOLT-ON | MOUNTING: SURFACE | BUS A I C: 65KA | BKR AIC: N/A

CIRCUIT DESCRIPTION	BKR	CIRCUIT	PHASE A	PHASE B	PHASE C	CIRCUIT	BKR	CIRCUIT DESCRIPTION
G-1161 HEADWORKS DIST. BOX GATE 1 (EXISTING)	15/3	1	292			2	20/3	CP-ME-1112 COURSE SCREEN 1 (EXISTING)
		3	292	292		4		
		5		292	292	6		
G-1162 HEADWORKS DIST. BOX GATE 2 (EXISTING)	15/3	7	292			8	40/3	CP-ME-1172 WASHER/COMPACTOR 1 (EXISTING)
		9	4999	292		10		
		11		4999	292	12		
G-1111 COURSE SCREEN 1 INLET GATE (EXISTING)	15/3	13	292			14	70/3	CP-1231 GRIT PUMP SYSTEM
		15	12497	292		16		
		17		12497	292	18		
G-1113 COURSE SCREEN 1 OUTLET GATE (EXISTING)	15/3	19	292			20	15/3	PV-1321 INFLUENT PUMP 3 ISO VALVE TO EQ
		21	292	292		22		
		23		292	292	24		
G-1151 HEADWORKS BYPASS GATE 1 (EXISTING)	15/3	25	292			26	15/3	PV-1322 INFLUENT PUMP 5 ISO VALVE TO MBR
		27	292	292		28		
		29		292	292	30		
G-1152 HEADWORKS BYPASS GATE 2 (EXISTING)	15/3	31	292			32	15/3	FV-1343 EQ BASIN ISO VALVE
		33	292	292		34		
		35		292	292	36		
CP-ME-1413 FINE SCREEN 1	20/3	37	1329			38	15/3	SPARE
		39		1329		40		
		41			1329	42		
H-1901 ELECTRICAL BUILDING CONDENSER 1	20/3	43	2659			44	70/3	XFMR-HW1 / LP-HW1
		45	15000	2659		46		
		47		15000	2659	48		
H-1903 ELECTRICAL BUILDING AIR HANDLER 1	15/3	49	638			50	20/3	SPARE
		51		638		52		
		53			638	54		
SPARE	20/3	55				56	15/3	SPACE
		57				58		
		59				60		
CONNECTED VA PER PHASE			40047.4	40047.4	40047.4	NOTES.		
CONNECTED AMPS PER PHASE			144.6	144.6	144.6			
25% OF CONTINUOUS & LIGHTING LOAD (VA)			10011.8	10011.8	10011.8			
CODE VA PER PHASE			50059.2	50059.2	50059.2			
CODE AMPS PER PHASE			180.7	180.7	180.7			

DP-HW1 LOAD CALCULATIONS

PANEL: DP-HW2 | VOLTAGE: 277/480V | MAIN CB: NONE | BUS AMPS: 400 AMP
CB TYPE: BOLT-ON | MOUNTING: SURFACE | BUS A I C: 65KA | BKR AIC: N/A

CIRCUIT DESCRIPTION	BKR	CIRCUIT	PHASE A	PHASE B	PHASE C	CIRCUIT	BKR	CIRCUIT DESCRIPTION
CP-ME-1122 COURSE SCREEN 2	20/3	1	292			2	20/3	CP-ME-1423 FINE SCREEN 2
		3	1329	292		4		
		5		1329	292	6		
CP-ME-1182 WASHER/COMPACTOR 2	40/3	7	4999			8	20/3	CP-ME-1433 FINE SCREEN 3 (FUTURE)
		9	1329	4999		10		
		11		1329	4999	12		
CP-ME-1611 HEADWORKS ODOR CONTROL UNIT	30/3	13	2393			14	20/3	H-1902 ELECTRICAL BUILDING CONDENSER 2
		15	2659	2393		16		
		17		2659	2393	18		
CP-ME-1711 FINE SCREENS ODOR CONTROL UNIT	30/3	19	2393			20	15/3	H-1904 ELECTRICAL BUILDING AIR HANDLER 2
		21	638	2393		22		
		23		638	2393	24		
XFMR-HW2 / LP-HW2	70/3	25	15000			26	20/2	MPC-SP
		27	5000	15000		28		
		29		5000	15000	30		
SPARE	20/3	31	2659			32	30/3	CP-1471 FINE SCREENS HIGH PRESSURE SYSTEM
		33		2659		34		
		35			2659	36		
SPACE		37				38		SPACE
		39				40		
		41				42		
SPACE		43				44		SPACE
		45				46		
		47				48		
CONNECTED VA PER PHASE			38692.5	38692.5	33892.5	NOTES.		
CONNECTED AMPS PER PHASE			139.7	139.7	121.6			
25% OF CONTINUOUS & LIGHTING LOAD (VA)			9673.1	9673.1	8423.1			
CODE VA PER PHASE			48365.6	48365.6	42115.6			
CODE AMPS PER PHASE			174.6	174.6	152.0			

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DP-HW2 LOAD CALCULATIONS

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	09/05/18	MPJ	DCL	MPJ
REVISIONS				
2	10/11/19	MPJ	DCL	MPJ
3	10/20/20	MPJ	DCL	MPJ
4	03/11/21	MPJ	DCL	MPJ
5	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - POWER DISTRIBUTION
CALCULATIONS 1

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E-12

SHEET	TAG	DESCRIPTION	MAKE	MODEL	SUPPLY	RANGE	COMMENTS
PI-04	LI-1301A	INFLUENT PUMP STATION LEVEL DISPLAY A	PRECISION DIGITAL	TRIDENT PD765 X2	24VDC	0-23.1 FEET	OR APPROVED EQUAL
PI-04	LI-1301B	INFLUENT PUMP STATION LEVEL DISPLAY B	PRECISION DIGITAL	TRIDENT PD765 X2	24VDC	0-23.1 FEET	OR APPROVED EQUAL
PI-04	LT-1301A	INFLUENT PUMP STATION LEVEL TRANSDUCER A	KPSI	750	24VDC	0-23.1 FEET	LARGE HEAD, OR APPROVED EQUAL
PI-04	LT-1301B	INFLUENT PUMP STATION LEVEL TRANSDUCER B	KPSI	750	24VDC	0-23.1 FEET	LARGE HEAD, OR APPROVED EQUAL
PI-04	LSH-1302	INFLUENT PUMP STATION HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT	6.2'	AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-04	LSL-1302	INFLUENT PUMP STATION LOW LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT	1.5'	AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-04	PI-1311	INFLUENT PUMP 1 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-60 PSI	OR APPROVED EQUAL
PI-04	PI-1312	INFLUENT PUMP 2 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-60 PSI	OR APPROVED EQUAL
PI-04	PI-1313	INFLUENT PUMP 3 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-60 PSI	OR APPROVED EQUAL
PI-04	PI-1314	INFLUENT PUMP 4 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-60 PSI	OR APPROVED EQUAL
PI-04	PI-1315	INFLUENT PUMP 5 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-60 PSI	OR APPROVED EQUAL
PI-04	FE/FIT-1332	INFLUENT PUMPS TO FINE SCREENS FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		24", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-04	FE/FIT-1342	INFLUENT PUMPS TO EQ BASIN FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		20", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-04A	LIT-1501	EQUALIZATION BASIN LEVEL TRANSMITTER	SIEMENS	HYDRORANGER 200	120VAC		OR APPROVED EQUAL
PI-04A	LE-1501	EQUALIZATION BASIN RADAR LEVEL SENSOR	SIEMENS	SITRANS LR200		0-25 FT	PROVIDE WITH FLANGE ADAPTER, OR APPROVED EQUAL
PI-04A	LIT-1502	EQUALIZATION BASIN LEVEL TRANSMITTER	SIEMENS	HYDRORANGER 200	120VAC		OR APPROVED EQUAL
PI-04A	LE-1502	EQUALIZATION BASIN RADAR LEVEL SENSOR	SIEMENS	SITRANS LR200			PROVIDE WITH FLANGE ADAPTER, OR APPROVED EQUAL
PI-04A	LSH-1503	EQUALIZATION BASIN HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-04A	LSH-1504	EQUALIZATION BASIN HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-04A	FE/FIT-1541	EQ BASIN PUMPS TO FINE SCREENS FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		16", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-05	PI-1470	NPW BOOSTER PUMP SUCTION PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-05	PI-1472	NPW BOOSTER PUMP DISCHARGE PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-06	AIT-2111	ANOXIC BASIN 1 ORP TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2111	ANOXIC BASIN 1 ORP SENSOR	HACH	DRD	AIT-2111		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-06	FE/FIT-2132	AERATION BASIN 1 AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		SPOOL PIECE WITH CONDITIONING PLATES, OR APPROVED EQUAL
PI-06	AIT-2151	AERATION BASIN 1 DISSOLVED OXYGEN TRANSMITTER 1	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2151	AERATION BASIN 1 DISSOLVED OXYGEN 1 SENSOR	HACH	LDO PROBE 2	AIT-2151		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT, OR APPROVED EQUAL
PI-06	AIT-2152	AERATION BASIN 1 DISSOLVED OXYGEN TRANSMITTER 2	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2152	AERATION BASIN 1 DISSOLVED OXYGEN 2 SENSOR	HACH	LDO PROBE 2	AIT-2152		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT, OR APPROVED EQUAL
PI-06	AE-2162	ANAEROBIC BASIN 1 ORP SENSOR	HACH	DRD	AIT-2111		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-06	AIT-2211	ANOXIC BASIN 2 ORP TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2211	ANOXIC BASIN 2 ORP SENSOR	HACH	DRD	AIT-2211		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-06	FE/FIT-2232	AERATION BASIN 2 AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		SPOOL PIECE WITH CONDITIONING PLATES, OR APPROVED EQUAL
PI-06	AIT-2251	AERATION BASIN 2 DISSOLVED OXYGEN TRANSMITTER 1	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2251	AERATION BASIN 2 DISSOLVED OXYGEN 1 SENSOR	HACH	LDO PROBE 2	AIT-2251		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT, OR APPROVED EQUAL
PI-06	AIT-2252	AERATION BASIN 2 DISSOLVED OXYGEN TRANSMITTER 2	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-06	AE-2252	AERATION BASIN 2 DISSOLVED OXYGEN 2 SENSOR	HACH	LDO PROBE 2	AIT-2252		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT, OR APPROVED EQUAL
PI-06	AE-2262	ANAEROBIC BASIN 2 ORP SENSOR	HACH	LDO PROBE 2	AIT-2211		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT, OR APPROVED EQUAL
PI-07	AIT-2311	ANOXIC BASIN 3 ORP TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2311	ANOXIC BASIN 3 ORP SENSOR	HACH	DRD	AIT-2311		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	FE/FIT-2332	AERATION BASIN 3 AIR FLOW SENSOR/TRANSMITTER 1	FCI	ST51	120VAC		SPOOL PIECE WITH CONDITIONING PLATES, OR APPROVED EQUAL
PI-07	AIT-2351	AERATION BASIN 3 DISSOLVED OXYGEN TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2351	AERATION BASIN 3 DISSOLVED OXYGEN 1 SENSOR	HACH	LDO PROBE 2	AIT-2351		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	AIT-2352	AERATION BASIN 3 DISSOLVED OXYGEN TRANSMITTER 2	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2352	AERATION BASIN 3 DISSOLVED OXYGEN 2 SENSOR	HACH	LDO PROBE 2	AIT-2352		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	AE-2362	ANAEROBIC BASIN 3 ORP SENSOR	HACH	DRD	AIT-2311		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	AIT-2411	ANOXIC BASIN 4 ORP TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2411	ANOXIC BASIN 4 ORP SENSOR	HACH	DRD	AIT-2411		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	FE/FIT-2432	AERATION BASIN 4 AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		SPOOL PIECE WITH CONDITIONING PLATES, OR APPROVED EQUAL
PI-07	AIT-2451	AERATION BASIN 4 DISSOLVED OXYGEN TRANSMITTER 1	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2451	AERATION BASIN 4 DISSOLVED OXYGEN 1 SENSOR	HACH	LDO PROBE 2	AIT-2451		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	AIT-2452	AERATION BASIN 4 DISSOLVED OXYGEN TRANSMITTER 2	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-07	AE-2452	AERATION BASIN 4 DISSOLVED OXYGEN 2 SENSOR	HACH	LDO PROBE 2	AIT-2452		PROVIDE DO SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	AE-2462	ANAEROBIC BASIN 4 ORP SENSOR	HACH	DRD	AIT-2411		PROVIDE ORP SENSOR WITH APPROPRIATE CABLE LENGTH & HANDRAIL MOUNTING KIT; OR APPROVED EQUAL
PI-07	LSL-2752	DRAIN PUMP STATION LOW LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-07	LSH-2752	DRAIN PUMP STATION HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-07	LSHH-2752	DRAIN PUMP STATION HIGH-HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-07	PI-2763	DRAIN PUMP PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-07	FE/FIT-2764	DRAIN PUMP STATION FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		6", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-08	LI-3801	MBR FEED PUMP WET WELL DISPLAY FOR LEVEL TRANSDUCER	PRECISION DIGITAL	TRIDENT PD765 X2	24VDC	0-23.1 FEET	OR APPROVED EQUAL
PI-08	LT-3801	MBR FEED PUMP WET WELL LEVEL TRANSDUCER	KPSI	750	24VDC		LARGE HEAD, OR APPROVED EQUAL
PI-08	LSH-3802	MBR FEED PUMP WET WELL HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-08	LSL-3802	MBR FEED PUMP WET WELL LOW LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-08	PI-3811	MBR FEED PUMP 1 PRESSURE GAUGE	ASHCROFT	1279 SERIES		0-30 PSI	OR APPROVED EQUAL
PI-08	PI-3814	MBR FEED PUMP 1 SEAL WATER PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	FSL-3815	MBR FEED PUMP 1 SEAL WATER LOW FLOW SWITCH	DWYER	V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-08	FI-3816	MBR FEED PUMP 1 SEAL WATER ROTAMETER FLOW GAUGE	KROHNE	VA40 SERIES			1/2", OR APPROVED EQUAL
PI-08	PI-3821	MBR FEED PUMP 2 PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	PI-3824	MBR FEED PUMP 2 SEAL WATER PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	FSL-3825	MBR FEED PUMP 2 SEAL WATER LOW FLOW SWITCH	DWYER	V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-08	FI-3826	MBR FEED PUMP 2 SEAL WATER ROTAMETER FLOW GAUGE	KROHNE	VA40 SERIES			1/2", OR APPROVED EQUAL
PI-08	PI-3831	MBR FEED PUMP 3 PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	PI-3834	MBR FEED PUMP 3 SEAL WATER PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	FSL-3835	MBR FEED PUMP 3 SEAL WATER LOW FLOW SWITCH	DWYER	V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-08	FI-3836	MBR FEED PUMP 3 SEAL WATER ROTAMETER FLOW GAUGE	KROHNE	VA40 SERIES			1/2", OR APPROVED EQUAL
PI-08	PI-3841	MBR FEED PUMP 4 PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	PI-3844	MBR FEED PUMP 4 SEAL WATER PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-08	FSL-3845	MBR FEED PUMP 4 SEAL WATER LOW FLOW SWITCH	DWYER	V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-08	FI-3846	MBR FEED PUMP 4 SEAL WATER ROTAMETER FLOW GAUGE	KROHNE	VA40 SERIES			1/2", OR APPROVED EQUAL
PI-08	FE/FIT-3861	MBR FEED PUMPS FLOW TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		42", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-09	AIT-3000	MBR INFLUENT CHANNEL TOTAL SUSPENDED SOLIDS TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-09	AE-3000	MBR INFLUENT CHANNEL TOTAL SUSPENDED SOLIDS SENSOR	HACH	SOLITAX	AIT-3000		PROVIDE WITH APPROPRIATE CABLE LENGTH, OR APPROVED EQUAL
PI-09	FE/FIT-3122	MEMBRANE BASIN 1 BLOWER AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		OR APPROVED EQUAL
PI-09	FE/FIT-3222	MEMBRANE BASIN 2 BLOWER AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		OR APPROVED EQUAL
PI-09	FE/FIT-3322	MEMBRANE BASIN 3 BLOWER AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		OR APPROVED EQUAL
PI-09	FE/FIT-3422	MEMBRANE BASIN 4 BLOWER AIR FLOW SENSOR/TRANSMITTER	FCI	ST51	120VAC		OR APPROVED EQUAL
PI-09	LSL-3682	SCUM LIFT STATION LOW LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-09	FE/FIT-3803	SCUM LIFT STATION WAS FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		8", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-10	LI-4001	PERMEATE SPLITTER BOX DISPLAY FOR LEVEL TRANSDUCER	PRECISION DIGITAL	TRIDENT PD765 X2	24VDC	0-23.1 FEET	OR APPROVED EQUAL
PI-10	LT-4001	PERMEATE SPLITTER BOX LEVEL TRANSDUCER	KPSI	750	24VDC		LARGE HEAD, OR APPROVED EQUAL
PI-10	LSH-4002	PERMEATE SPLITTER BOX HIGH LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-10	LSL-4002	PERMEATE SPLITTER BOX LOW LEVEL SWITCH	USA BLUEBOOK	48233	NO CONTACT		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
PI-10	TE/TIT-4003	PERMEATE EFFLUENT TEMPERATURE	ROSEMOUNT	SERIES 78 & 3144P	24VDC		PROVIDE WITH 316SS THERMOWELL, OR APPROVED EQUAL
PI-10	AIT-4004	PERMEATE SPLITTER BOX pH LEVEL TRANSMITTER	HACH	SC200	120VAC		OR APPROVED EQUAL
PI-10	AE-4004	PERMEATE SPLITTER BOX pH LEVEL SENSOR	HACH	pHD	AIT-4004		PROVIDE WITH APPROPRIATE CABLE LENGTH, OR APPROVED EQUAL
PI-11	PIT-2641	BLOWERS TO AERATION BASINS PRESSURE TRANSMITTER	ROSEMOUNT	3051 SERIES	24VDC		OR APPROVED EQUAL
PI-11	TE/TIT-2642	BLOWERS TO AERATION BASINS TEMPERATURE SENSOR/TRANSMITTER	ROSEMOUNT	SERIES 78 & 3144P	24VDC		PROVIDE WITH 316SS THERMOWELL, OR APPROVED EQUAL
PI-11	PIT-3741	BLOWERS TO MEMBRANE BASINS PRESSURE TRANSMITTER	ROSEMOUNT	3051 SERIES	24VDC		OR APPROVED EQUAL
PI-11	TE/TIT-3742	BLOWERS TO MEMBRANE BASINS TEMPERATURE SENSOR/TRANSMITTER	ROSEMOUNT	SERIES 78 & 3144P	24VDC		PROVIDE WITH 316SS THERMOWELL; OR APPROVED EQUAL
PI-12	LIT-5002	SODIUM HYPOCHLORITE TANK RADAR LEVEL TRANSMITTER	FLOWLINE	ECHO PULSE LR20	24VDC		PROVIDED BY TANK MANUFACTURER
PI-12	LI-5002	SODIUM HYPOCHLORITE TANK LEVEL DISPLAY	PRECISION DIGITAL	TRIDENT PD765 X2	24VDC		OR APPROVED EQUAL
PI-12	PI-5071	SODIUM HYPOCHLORITE CIRCULATION PUMPS PRESSURE GAUGE	ASHCROFT	1279 SERIES			OR APPROVED EQUAL
PI-12	FE/FIT-5072	SODIUM HYPOCHLORITE CIRCULATION PUMPS FLOW SENSOR/TRANSMITTER	ENDRESS & HAUSER	PROMAG W 500	120VAC		1", 6000 IS THE TRANSMITTER, W 500 IS THE FLOWMETER, OR APPROVED EQUAL
PI-13	WIT-5301	ANTISCALANT TOTE SCALE TRANSMITTER	SCALETRON	1020	120VAC		
PI-13	WE-5301	ANTISCALANT TOTE SCALE SENSOR	SCALETRON	4042-63	WIT-5301		
PI-13	FSH-5402	EMERGENCY WASH STATION 1 HIGH FLOW SWITCH	DWYER	LOW FLOW MODEL V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-13	FSH-5412	EMERGENCY WASH STATION 2 HIGH FLOW SWITCH	DWYER	LOW FLOW MODEL V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-13	FSH-5422	EMERGENCY WASH STATION 3 HIGH FLOW SWITCH	DWYER	LOW FLOW MODEL V6	NO/NC CONTACT		OR APPROVED EQUAL
PI-13A	LIT-85031	AMMONIUM SULFATE TANK RADAR LEVEL TRANSMITTER	FLOWLINE	ECHO PULSE LR20	24VDC		PROVIDED BY TANK MANUFACTURER
PI-13A	LIT-85551	SULFURIC ACID TANK RADAR LEVEL TRANSMITTER	FLOWLINE	ECHO PULSE LR20	24VDC		PROVIDED BY TANK MANUFACTURER
PI-14	AIT-30095	RO INFLUENT pH LEVEL TRANSMITTER	HACH	SC200	120VAC		MOUNTED TO SENSOR AE-30095, OR APPROVED EQUAL
PI-14	AE-30095	RO INFLUENT pH LEVEL SENSOR	HACH	pHD	AIT-30095		OR APPROVED EQUAL

4 INSTRUMENTS ADDED

INSTRUMENT SCHEDULE 1

6/17/2021 C:\USERS\DANIEL.LEAVITT\AQUA ENGINEERING\BEAUMONT - DOCUMENTS\WEBB170227 SALT MITIGATION WWTP UPGRADE\050 DRAFTING\997 ELECTRICAL\14 E-17 INSTRUMENT SCHEDULE 1.DWG

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

1	04/22/19	MPJ	DCL	MPJ
2	06/24/19	MPJ	DCL	MPJ
3	10/11/19	MPJ	DCL	MPJ
4	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - POWER DISTRIBUTION
INSTRUMENT SCHEDULE 1

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
CIVIL ENGINEERS
3788 McCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

5
P1471, P1471A ADDED

POWER CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED IN	DUCTBANKS	NOTES
P1461	1"	3#10 W/#12 GND	480VAC	MCC-HW2	ME-1461		101, 105	
P1471	3/4"	3#10 W/#12 GND	480VAC	DP-HW2	CP-1471			
P1471A	1"	3#10 W/3#12 GND	480VAC	CP-1471	ME-1428, ME-1428, P-1471		101, 105	CONDUIT WAS PREVIOUSLY SP1412
P1501	1"	2#10 W/#16 GND	120VAC	LP-SH	LIT-1501	P1501+	303.1, 303.2	
P1502	1"	2#10 W/#16 GND	120VAC	LP-SH	LIT-1502	P1501+	303.1, 303.2	
P1511	1"	2#10 W/#16 GND	120VAC	LP-SH	LCP-1511		303.1, 303.3	
P1514	1"	2#10 W/#16 GND	120VAC	LP-SH	LCP-1514		303.1, 303.3	
P1531	1.5"	3#4 W/#8 GND	480VAC	MCC-EQ	P-1531		303.1, 303.2	
P1532	1.5"	3#4 W/#8 GND	480VAC	MCC-EQ	P-1532		303.1, 303.2	
P1533	1.5"	3#4 W/#8 GND	480VAC	MCC-EQ	P-1533		303.1, 303.2	
P1541	1"	2#12 W/#12 GND	120VAC	LP-SH	FIT-1541	P1501+	303.1, 303.2	
P1611	1"	3#8 W/#10 GND	480VAC	DP-HW2	LCP-ME-1611		101, 104, 104.3	
P1611A	1"	3#12 W/#12 GND	480VAC	LCP-ME-1611	ME-1611			
P1621	1"	2#12 W/#12 GND	120VAC	LCP-ME-1611	SV-1621			
P1632	1"	2#12 W/#12 GND	120VAC	LCP-ME-1611	P-1632			
P1711	1"	3#8 W/#10 GND	480VAC	DP-HW2	LCP-ME-1711		101, 105	
P1711A	1"	3#12 W/#12 GND	480VAC	LCP-ME-1711	ME-1711			
P1721	1"	2#12 W/#12 GND	120VAC	LCP-ME-1711	SV-1721			
P1732	1"	2#12 W/#12 GND	120VAC	LCP-ME-1711	P-1732			
P1811	1"	3#8 W/#10 GND	480VAC	MCC-HW1	DS-P-1811		101, 101.2	
P1811A	2"	MFR CABLE	480VAC	DS-P-1811	P-1811			
P1821	1"	3#8 W/#10 GND	480VAC	MCC-HW2	DS-P-1821		101, 101.2	
P1821A	2"	MFR CABLE	480VAC	DS-P-1821	P-1821			
P1822	1"	2#12 W/#12 GND	120VAC	LP-HW1	FIT-1822		101, 101.2	
P1901	1"	3#10 W/#12 GND	480VAC	DP-HW1	H-1901			
P1902	1"	3#10 W/#12 GND	480VAC	DP-HW2	H-1902			
P1903	1"	3#12 W/#12 GND	480VAC	DP-HW1	H-1903			
P1904	1"	3#12 W/#12 GND	480VAC	DP-HW2	H-1904			
P2111	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2111	P0251+, P2111+	202, 204	
P2131	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FV-2131	P2131+, P2151+, P2152+	203, 205	
P2132	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-2132	P2131+, P2151+, P2152+	203, 205	
P2151	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2151	P2151+, P2152+	203, 205	
P2152	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2152	P2152+	203, 205	
P2171	1.25"	VFD CABLE 3#8 W/#10 GND	480VAC	MCC-MB1	LCP-P-2171		202, 204	
P2211	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2211	P0251+, P2111+	202, 204	
P2231	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FV-2231	P2231+, P2251+, P2252+	203, 205	
P2232	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-2232	P2231+, P2251+, P2252+	203, 205	
P2251	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2251	P2251+, P2252+	203, 205	
P2252	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2252	P2252+	203, 205	
P2271	1.25"	VFD CABLE 3#8 W/#10 GND	480VAC	MCC-MB2	LCP-P-2271		202, 204	
P2311	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2311	P0253+, P2311+	202, 204	
P2331	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FV-2331	P2331+, P2351+, P2352+	203, 205	
P2332	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-2332	P2331+, P2351+, P2352+	203, 205	
P2351	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2351	P2351+, P2352+	203, 205	
P2352	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2352	P2352+	203, 205	
P2371	1.25"	VFD CABLE 3#8 W/#10 GND	480VAC	MCC-MB1	LCP-P-2371		202, 204	
P2411	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2411	P0253+, P2411+	202, 204	
P2431	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FV-2431	P2431+, P2451+, P2452+	203, 205	
P2432	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-2432	P2431+, P2451+, P2452+	203, 205	
P2451	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2451	P2451+, P2452+	203, 205	
P2452	3/4"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-2452	P2452+	203, 205	
P2471	1.25"	VFD CABLE 3#8 W/#10 GND	480VAC	MCC-MB2	LCP-P-2471		202, 204	
P2601	2-4"	2 SETS OF 3-350MCM W/#1 GND	480VAC	SWGR-MB	LCP-ME-2601			
P2611	2-4"	2 SETS OF 3-350MCM W/#1 GND	480VAC	SWGR-MB	LCP-ME-2611			
P2621	2-4"	2 SETS OF 3-350MCM W/#1 GND	480VAC	SWGR-MB	LCP-ME-2621			
P2631	2-4"	WIRE FUTURE	480VAC	SWGR-MB	LCP-ME-2631			STUB UP AND CAP
P2651	1"	2#12 W/#12 GND	120VAC	LP-MB2	FV-2651			
P2761	1.25"	3#8 W/#10 GND	480VAC	MCC-MB1	LCP-2761		202, 204, 204.1	
P2761A	2"	MFR CABLE	480VAC	LCP-2761	P-2761			
P2762	1.25"	3#8 W/#10 GND	480VAC	MCC-MB2	LCP-2761		202, 204, 204.1	
P2762A	2"	MFR CABLE	480VAC	LCP-2761	P-2762			
P2764	1"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-2764		202, 204, 204.1	
P3000	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-3000			
P3001	1"	3#12 W/#12 GND	480VAC	DP-MB	DS-CP-3001			
P3001A	1"	3#12 W/#12 GND	480VAC	DS-CP-3001	CP-3001			
P3004	1"	2#12 W/#12 GND	120VAC	LP-MB1	CP-3004, SV-3004			ROUTE POWER THROUGH A 20A, 120VAC DISCONNECT SWITCH
P3121	1"	10#12 W/5#12 GND	120VAC	LP-MB3	FV-3121, FIT-3122, FV-3151A, FV-3151B, FV-3171			
P3181	1.25"	3#4 W/#8 GND, 2#14	480VAC	MCC-MB1	P-3181			
P3191	1"	6#12 W/3#12 GND	120VAC	LP-MB3	FV-3911, FIT-3192, G-3101			
P3192	1"	10#12 W/5#12 GND	120VAC	LP-MB3	SV-3192, 3292, 3392, 3492, 3592			
P3193	1"	6#12 W/3#12 GND	120VAC	LP-MB3	AIT-3193, 3393, 3593			
P3221	1"	10#12 W/5#12 GND	120VAC	LP-MB3	FV-3221, FIT-3222, FV-3251A, FV-3251B, FV-3271			
P3281	1.25"	3#4 W/#8 GND, 2#14	480VAC	MCC-MB2	P-3281			
P3291	1"	6#12 W/3#12 GND	120VAC	LP-MB3	FV-3911, FIT-3292, G-3201			
P3321	1"	10#12 W/5#12 GND	120VAC	LP-MB3	FV-3321, FIT-3322, FV-3351A, FV-3351B, FV-3371			
P3381	1.25"	3#4 W/#8 GND, 2#14	480VAC	MCC-MB1	P-3381			
P3391	1"	6#12 W/3#12 GND	120VAC	LP-MB3	FV-3911, FIT-3392, G-3301			
P3421	1"	10#12 W/5#12 GND	120VAC	LP-MB3	FV-3421, FIT-3422, FV-3451A, FV-3451B, FV-3471			
P3481	1.25"	3#4 W/#8 GND, 2#14	480VAC	MCC-MB2	P-3481			
P3491	1"	6#12 W/3#12 GND	120VAC	LP-MB3	FV-3911, FIT-3492, G-3401			
P3521	1"	WIRE FUTURE	120VAC	LP-MB3	FV-3521, FIT-3522, FV-3551A, FV-3551B, FV-3571			STUB UP AND CAP
P3581	1.25"	WIRE FUTURE	480VAC	MCC-MB1	P-3581			STUB UP AND CAP
P3591	1"	WIRE FUTURE	120VAC	LP-MB3	FV-3911, FIT-3592, G-3501			STUB UP AND CAP
P3701	2-4"	2 SETS OF 3-4/0 W/#2 GND	480VAC	SWGR-MB	LCP-ME-3701			
P3711	2-4"	2 SETS OF 3-4/0 W/#2 GND	480VAC	SWGR-MB	LCP-ME-3711			
P3721	2-4"	2 SETS OF 3-4/0 W/#2 GND	480VAC	SWGR-MB	LCP-ME-3721			
P3731	2-4"	WIRE FUTURE	480VAC	SWGR-MB	LCP-ME-3731			STUB UP AND CAP
P3751	1"	2#12 W/#12 GND	120VAC	LP-MB2	FV-3751			
P3811	2"	3#3 W/#6 GND, 2#14	480VAC	MCC-MB1	P-3811			
P3821	2"	3#3 W/#6 GND, 2#14	480VAC	MCC-MB2	P-3821			
P3831	2"	3#3 W/#6 GND, 2#14	480VAC	MCC-MB1	P-3831			
P3841	2"	3#3 W/#6 GND, 2#14	480VAC	MCC-MB2	P-3841			
P3851	2"	WIRE FUTURE	480VAC	MCC-MB1	P-3851 (FUTURE)			STUB OUT AND CAP CONDUIT NEAR FUTURE PUMP LOCATION
P3861	1"	2#12 W/#12 GND	120VAC	LP-MB2	FIT-3861			
P3891	1"	VFD CABLE 3#10 W/#10 GND	480VAC	MCC-MB1	LCP-3891			THRU 480VAC CABLE TRAY
P3891A	1.5"	MFR CABLE	480VAC	LCP-3891	P-3891			
P3892	1"	VFD CABLE 3#10 W/#10 GND	480VAC	MCC-MB2	LCP-3891			THRU 480VAC CABLE TRAY
P3892A	1.5"	MFR CABLE	480VAC	LCP-3891	P-3892			
P3893	3/4"	2#12 W/#12 GND TC	120VAC	LP-MB2	FIT-3893			THRU 120VAC CABLE TRAY
P3901	3/4"	3#12 W/#12 GND TC	480VAC	MCC-MB1	H-3901			THRU 480VAC CABLE TRAY
P3902	3/4"	3#12 W/#12 GND TC	480VAC	MCC-MB2	H-3902			THRU 480VAC CABLE TRAY
P3903	3/4"	3#12 W/#12 GND TC	480VAC	MCC-MB1	H-3903			THRU 480VAC CABLE TRAY
P3904	3/4"	3#12 W/#12 GND TC	480VAC	MCC-MB2	H-3904			THRU 480VAC CABLE TRAY
P3905	3/4"	2#12 W/#12 GND TC	120VAC	LP-MB1	H-3905			
P3906	1"	2#12 W/#12 GND	120VAC	LP-MB1	H-3906			
P3907	3/4"	2#12 W/#12 GND TC	120VAC	LP-MB1	H-3907			THRU 120VAC CABLE TRAY
P3908	3/4"	2#12 W/#12 GND TC	120VAC	H-3907	H-3908	C3907+		THRU 120VAC CABLE TRAY
P3909	3/4"	2#12 W/#12 GND TC	120VAC	H-3907	H-3909	C3907+		THRU 120VAC CABLE TRAY

NOTES:

1. CONDUITS THAT ARE COMBINED BETWEEN PULL POINTS ARE DENOTED WITH A + (PLUS) SYMBOL. SEE THE COMBINED CONDUITS SCHEDULE ON SHEET CE-11. CONDUITS THAT HAVE BEEN COMBINED SHALL BE LABELED WITH MULTIPLE CONDUIT TAGS, ONE FOR EACH CONDUIT THAT HAS BEEN COMBINED.
2. THE CONDUIT DEVELOPMENT AND SCHEDULE DOES NOT SHOW CONDUIT AND CONDUCTORS FOR LIGHTS, RECEPTACLES AND DATA JACKS. IT ALSO DOESN'T SHOW CONDUIT AND CONDUCTORS FOR THE MBR BUILDING'S HVAC AND APPLIANCES FOR THE OFFICE, BREAK ROOM, CONTROL ROOM, LAB, MECHANICAL ROOM AND RESTROOMS. THE CONTRACTOR IS RESPONSIBLE TO INCLUDE THESE CONDUITS AND CONDUCTORS IN THEIR WORK AND IN THEIR SUBMITTED CONDUIT ROUTING PLAN.

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

2	06/24/19	MPJ	DCL	MPJ
3	10/11/19	MPJ	DCL	MPJ
4	10/26/20	MPJ	DCL	MPJ
5	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - CONDUITS AND DUCTBANKS
CONDUIT SCHEDULE 2

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0 1/2 1
DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

POWER CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED IN	DUCTBANKS	NOTES
P3910	3/4"	2#12 W/#12 GND TC	120VAC	LP-MB1	H-3910			THRU 120VAC CABLE TRAY
P3911	3/4"	2#12 W/#12 GND TC	120VAC	H-3910	H-3911	C3910+		THRU 120VAC CABLE TRAY
P3912	3/4"	2#12 W/#12 GND	120VAC	LP-MB1	H-3912			
P3913	3/4"	2#12 W/#12 GND	120VAC	H-3912	H-3913			
P3960	1"	3#12 W/#12 GND	480VAC	DP-MB	H-3960			
P3961	1"	3#12 W/#12 GND	480VAC	DP-MB	H-3961			
P3965	1"	3#10 W/#12 GND	480VAC	DP-MB	H-3965			
P3967	1"	3#10 W/#12 GND	480VAC	DP-MB	H-3967			
P3981	1"	3#10 W/#12 GND	480VAC	DP-MB	DS-ME-3981			THROUGH 480VAC CABLE TRAY
P3981A	1"	3#10 W/#12 GND	480VAC	DS-ME-3981	ME-3981			
P4004	1"	2#12 W/#12 GND	120VAC	LP-MB2	AIT-4004			
P4602	1.5"	6#10 W/3 #10 GND	120VAC	LP-MB2	AIT-4602, AIT-4603, FIT-4605		203, 205	
P4604	1"	2#10 W/#10 G	120VAC	LP-MB2	ME-4604		203, 205	WIRE TO DEDICATED DUPLEX OUTLET
P5002	1"	2 #12 W/#12 GND	120VAC	LP-MB2	CHEM. TANK AREA 1 LIGHTS & OUTLETS		206	THRU JB-5002
P5031	3/4"	3#12 W/#12 GND TC	480VAC	DP-MB	LCP-5031			THRU 480VAC CABLE TRAY
P5031A	3/4"	3#12 W/#12 GND	480VAC	LCP-5031	P-5031			
P5041	3/4"	3#12 W/#12 GND	480VAC	LCP-5031	P-5041			
P5061	1"	3#12 W/#12 GND	480VAC	DP-MB	LCP-5061		206	
P5061A	3/4"	3#12 W/#12 GND	480VAC	LCP-5061	P-5061			
P5062	3/4"	3#12 W/#12 GND	480VAC	LCP-5061	P-5062			
P5072	1"	2#12 W/#12 GND TC	120VAC	LP-MB2	FIT-5072			THRU 120VAC CABLE TRAY
P5121	3/4"	3#12 W/#12 GND TC	480VAC	DP-MB	LCP-5121			THRU 480VAC CABLE TRAY
P5121A	3/4"	3#12 W/#12 GND	480VAC	LCP-5121	P-5121			
P5131	3/4"	3#12 W/#12 GND	480VAC	LCP-5121	P-5131			
P5231	1"	2#12 W/#12 GND TC	120VAC	LP-MB2	LA-5231			THRU 120VAC CABLE TRAY
P5301	3/4"	2#12 W/#12 GND TC	120VAC	LP-MB2	WIT-5301			THRU 120VAC CABLE TRAY
P5901	1"	2#12 W/#12 GND	120VAC	LP-SH	LIT-5901		301, 302, 302.5	
P5911	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-5911/RIO-5911		301, 302, 302.5	
P5701	1"	2#12 W/#12 GND	120VAC	LP-SH	LIT-5701		301, 302, 302.7	
P5711	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-5711/RIO-5711		301, 302, 302.7	
P5801	1"	2#12 W/#12 GND	120VAC	LP-SH	LIT-5801		301, 302, 302.6	
P5811	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-5811/RIO-5811		301, 302, 302.6	
P5851	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-5851/RIO-5851		301, 302, 302.6	
P6103	1"	3#12 W/#12 GND	480VAC	MCC-UV (EXISTING)	ME-6103			
P6104	3/4"	2#12 W/#12 GND	120VAC	SCC-UV	AIT-6104			
P6111	2"	4#1 W/#6 GND	480VAC	DP-UV1	PDC-6111			
P6114	1.25"	WIRE FUTURE	480VAC	DP-UV1	PDC-6114			
P6115	1"	2#12 W/#12 GND	120VAC	LP-D	LOW LEVEL CONTROL BOX 1	P6115+		
P6121	1"	3#12 W/#14 GND	480VAC	DP-UV1	HSC-6121			
P6211	2"	4#1 W/#6 GND	480VAC	DP-UV2	PDC-6211			
P6214	1.25"	WIRE FUTURE	480VAC	DP-UV2	PDC-6214			
P6215	1"	2#12 W/#12 GND	120VAC	LP-D	LOW LEVEL CONTROL BOX 2	P6115+		
P6221	1"	3#12 W/#14 GND	480VAC	DP-UV2	HSC-6221			
P6302	1"	2#12 W/#12 GND	120VAC	LP-HW1	ME-6302	P6302+	102, 38, 108	WIRE TO DEDICATED DUPLEX OUTLET
P6401	1.5"	3#8 W/#10 GND	480VAC	MCC-HW1	P-6401		102, 38, 108	
P6402	1.5"	3#8 W/#10 GND	480VAC	MCC-HW2	P-6402		102, 38, 108	
P6403	1.5"	3#8 W/#10 GND	480VAC	MCC-HW1	P-6403		102, 38, 108	
P6404	1.5"	3#8 W/#10 GND	480VAC	MCC-HW2	P-6404		102, 38, 108	
P6411	1.25"	3#6 W/#10 GND	480VAC	DP-HW2	CP-6411			
P6411A	1"	VFD CABLE: 6#10 W/#12 GND	480VAC	CP-6411 (VFD-P-6411)	P-6411; SV-6413; SV-6414; SV-6415	P6411A+	101, 105	
P6412A	1"	VFD CABLE: 3#10 W/#12 GND	480VAC	CP-6411 (VFD-P-6412)	P-6412	P6411A+	101, 105	
P6420	1"	2#12 W/#12 GND	120VAC	LP-HW1	FIT-6420		102, 38, 108	
P7111	1.5"	3#8 W/#10 GND	480VAC	MCC-HW1	LCP-P-7111		102, 38, 108	
P7111A	2"	MFR CABLE	480VAC	LCP-P-7111	P-7111			
P7112	1.5"	3#8 W/#10 GND	480VAC	MCC-HW2	LCP-P-7112		102, 38, 108	
P7113A	2"	MFR CABLE	480VAC	LCP-P-7113	P-7113			
P7113	1.5"	3#8 W/#10 GND	480VAC	MCC-HW1	LCP-P-7113		102, 38, 108	
P7113A	2"	MFR CABLE	480VAC	LCP-P-7113	P-7113			
P7122	1"	2#12 W/#12 GND	120VAC	LP-HW1	FIT-7122	P6302+	102, 38, 108	
P7151	1"	2#12 W/#12 GND	120VAC	LP-HW1	FIT-7151	P6302+	102, 38, 108	
P7211	2-4"	WIRE FUTURE	480VAC	SWGR-HW	FUTURE VFD-P-7211			STUB UP AND CAP
P7211A	4"	WIRE FUTURE	480VAC	FUTURE VFD-P-7211	FUTURE P-7211		103, 103.2	STUB UP AND CAP
P7212	2-4"	WIRE FUTURE	480VAC	SWGR-HW	FUTURE VFD-P-7212			STUB UP AND CAP
P7212A	4"	WIRE FUTURE	480VAC	FUTURE VFD-P-7212	FUTURE P-7212		103, 103.2	STUB UP AND CAP
P7213	2-4"	WIRE FUTURE	480VAC	SWGR-HW	FUTURE VFD-P-7213			STUB UP AND CAP
P7213A	4"	WIRE FUTURE	480VAC	FUTURE VFD-P-7213	FUTURE P-7213		103, 103.2	STUB UP AND CAP
P7401	1"	2#10 W/#10 GND	120VAC	LP-HW1	LIT-7401		102, 38, 108	
P7410	1"	2#10 W/#10 GND	120VAC	LP-HW1	LCP-7410		102, 38, 108	
P7471	1"	4#10 W/#10 GND	120VAC	LP-HW1	LCP-7471, AIT-7472	P6302+	102, 38, 108	
P7471A	1"	2#10 W/#10 GND	120VAC	LCP-7471	P-7471			
P7511	1"	2#12 W/#12 GND	120VAC	LP-RW	LCP-7511			
P8101	1.25"	VFD CABLE 3#6 W/#8 GND	480VAC	MCC-HW1	P-8101		103, 103.1	
P8102	1.25"	VFD CABLE 3#6 W/#8 GND	480VAC	MCC-HW2	P-8102		103, 103.1	
P8103	1.25"	VFD CABLE 3#6 W/#8 GND	480VAC	MCC-HW2	P-8103		103, 103.1	
P8401	2"	3 2/0 W/#4 GND	480VAC	SWGR-HW	VFD-ME-8401		103, 103.1	
P8401A	2"	3 2/0 W/#4 GND	480VAC	VFD-ME-8401	ME-8401			
P8401B	1"	3#12 W/#12 GND	480VAC	VFD-ME-8401	ME-8401			
P8402	2"	3 2/0 W/#4 GND	480VAC	SWGR-HW	VFD-ME-8402		103, 103.1	
P8402A	2"	3 2/0 W/#4 GND	480VAC	VFD-ME-8402	ME-8402			
P8402B	1"	3#12 W/#12 GND	480VAC	VFD-ME-8402	ME-8402			
P8403	2"	3 2/0 W/#4 GND	480VAC	SWGR-HW	VFD-ME-8403		103, 103.1	
P8403A	2"	3 2/0 W/#4 GND	480VAC	VFD-ME-8403	ME-8403			
P8403B	1"	3#12 W/#12 GND	480VAC	VFD-ME-8403	ME-8403			
P8411	1"	2#12 W/#12 GND	120VAC	MPC-SB	FIV-8411			
P8412	1"	2#12 W/#12 GND	120VAC	MPC-SB	FIV-8412			
P8433	1"	2#12 W/#12 GND	120VAC	MPC-SB	FIT-8433			
P8443	1"	2#12 W/#12 GND	120VAC	MPC-SB	FIT-8443			
P8501	1"	4#12 W/2#12 GND	120VAC	LP-SH	FIV-8501, FIT-8502			
P8511	3"	3-250 MCM W/#2 GND	480VAC	SWBD-SH	CP-ME-8511			
P8511A	2"	3-1/0 W/#6 GND	480VAC	CP-ME-8511	ME-8511A			
P8511B	1.5"	3#6 W/#10 GND	480VAC	CP-ME-8511	ME-8511B			
P8512	3/4"	3#12 W/#12 GND	480VAC	CP-ME-8511	G-8512			
P8541	3"	3-250 MCM W/#2 GND	480VAC	SWBD-SH	CP-ME-8541			
P8541A	2"	3-1/0 W/#6 GND	480VAC	CP-ME-8541	ME-8541A			
P8541B	1.5"	3#6 W/#10 GND	480VAC	CP-ME-8541	ME-8541B			
P8542	3/4"	3#12 W/#12 GND	480VAC	CP-ME-8541	G-8542			
P8571	3"	3-250 MCM W/#2 GND	480VAC	SWBD-SH	CP-ME-8571			
P8571A	2"	3-1/0 W/#6 GND	480VAC	CP-ME-8571	ME-8571A			
P8571B	1.5"	3#6 W/#10 GND	480VAC	CP-ME-8571	ME-8571B			
P8572	3/4"	3#12 W/#12 GND	480VAC	CP-ME-8571	G-8572			
P8591	1"	2#12 W/#12 GND	120VAC	LP-SH	ME-8591			
P8592	1"	2#12 W/#12 GND	120VAC	LP-SH	ME-8592			
P8603	1"	3#12 W/#12 GND	480VAC	MCC-SH	P-8603			
P8611	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-ME-8611			
P8612	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-ME-8612			
P8613	1"	2#12 W/#12 GND	120VAC	LP-SH	LCP-ME-8613			
P8740	1"	2#12 W/#12 GND	120VAC	LP-SH	H-8740			
P8741	1"	2#12 W/#12 GND	120VAC	LP-SH	H-8741			
P8751	1"	3#12 W/#12 GND	480VAC	MCC-SH	H-8751			
P8757	1"	2#12 W/#12 GND	120VAC	LP-SH	H-8757			
P8758	1"	2#12 W/#12 GND	120VAC	LP-SH	H-8758			
P8769	1"	2#8 W/#10 GND	208VAC	LP-SH	H-8769			
P8770	1"	2#12 W/#12 GND	208VAC	LP-SH	H-8770			
P8771	1"	2#8 W/#10 GND	208VAC	LP-SH	H-8771			
P8772	1"	2#12 W/#12 GND	208VAC	LP-SH	H-8772			
P8801	1"	3#10 W/#12 GND	480VAC	SWBD-SH	ME-8801			

11
P6411, P6411A & P6421A DELETED

NOTES:

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NO.	DATE	DESIGN	DRAWN	CHECKED
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C	09/05/18	MPJ	DCL	MPJ
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9	03/11/21	MPJ	DCL	MPJ
10	05/12/21	MPJ	DCL	MPJ
11	06/07/21	MPJ	DCL	MPJ

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CONDUIT SCHEDULE 3

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0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

CE-03

4 C1417, C1418, C1427 ADDED

4 C1471 ADDED

CONTROL CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED	DUCTBANKS	NOTES
C1312	N/A	4#14	120VAC	LCP-1311	JB-P-1312	P1312+, C1311D+		
C1313	N/A	4#14	120VAC	LCP-1311	JB-P-1313	P1313+, C1311D+		
C1314	N/A	4#14	120VAC	LCP-1311	JB-P-1314	P1314+, C1311D+		
C1315	N/A	4#14	120VAC	LCP-1311	JB-P-1315	P1315+, C1311D+		
C1321	1"	10#14	120VAC	LCP-1311	FV-1321	C1321+		
C1322	1"	10#14	120VAC	LCP-1311	FV-1322	C1321+		
C1343	1"	10#14	120VAC	LCP-1311	FV-1343	C1321+		
C1413	1"	10#14	120VAC	MCC-HW1	CP-ME-1413			
C1413A	1.5"	30#12 W/#12 GND	120VAC	CP-ME-1413	LCP-ME-1413		101, 105	
C1417	1"	2#12	120VAC	LCP-1471	SV-1417			
C1418	1"	8#12	INTRINSICALLY SAFE	CP-1471	ZS-1418A, ZS-1418B, ZS-1426A, ZS-1426B			CONDUIT WAS PREVIOUSLY SP1432
C1423	1"	10#14	120VAC	MCC-HW1	CP-ME-1423			
C1423A	1.5"	30#12 W/#12 GND	120VAC	CP-ME-1423	LCP-ME-1423		101, 105	
C1427	1"	2#12	120VAC	LCP-1471	SV-1427			
C1433	1"	WIRE FUTURE	120VAC	MCC-HW1	FUTURE CP-ME-1433			STUB UP CONDUIT AND CAP
C1433A	1.5"	WIRE FUTURE	120VAC	FUTURE CP-ME-1433	FUTURE LCP-ME-1433		101, 105	STUB UP CONDUIT AND CAP
C1441	1"	12#12 W/#12 GND	120VAC	MCC-HW1	LCP-ME-1441		101, 105	
C1441A	1"	6#12 W/#12 GND	120VAC	LCP-ME-1441	SSL-1441, ZS-1441			
C1451	1"	12#12 W/#12 GND	120VAC	MCC-HW2	LCP-ME-1451		101, 105	
C1451A	1"	6#12 W/#12 GND	120VAC	LCP-ME-1451	SSL-1451, ZS-1451			
C1461	1"	WIRE FUTURE	120VAC	MCC-HW2	FUTURE LCP-ME-1461		101, 105	STUB UP CONDUIT AND CAP
C1471	1"	9#12 W/#12 GND	120VAC	CP-1471	LCP-1471	C1471+	101, 105	
C1503	1"	2#12 W/#12 GND	INTRINSICALLY SAFE	RIO-SH	LSH-1503	C1503+	303.1, 303.2	
C1504	1"	2#12 W/#12 GND	INTRINSICALLY SAFE	RIO-SH	LSH-1504	C1503+	303.1, 303.2	
C1511	2"	30#12	120VAC	RIO-SH	LCP-1511		303.1, 303.3	
C1511A	1"	3#14	INTRINSICALLY SAFE	LCP-1511	ZS-1511			
C1512	1"	3#14	INTRINSICALLY SAFE	LCP-1511	ZS-1512			
C1513	1"	3#14	INTRINSICALLY SAFE	LCP-1511	ZS-1513			
C1514	2"	30#12	120VAC	RIO-SH	LCP-1514		303.1, 303.3	
C1514A	1"	3#14	INTRINSICALLY SAFE	LCP-1514	ZS-1514			
C1515	1"	3#14	INTRINSICALLY SAFE	LCP-1514	ZS-1515			
C1516	1"	3#14	INTRINSICALLY SAFE	LCP-1514	ZS-1516			
C1521	1"	8#14 W/#14 GND	120VAC	LCP-1511	FV-1521			
C1522	1"	8#14 W/#14 GND	120VAC	LCP-1511	FV-1522			
C1523	1"	8#14 W/#14 GND	120VAC	LCP-1511	FV-1523			
C1524	1"	8#14 W/#14 GND	120VAC	LCP-1514	FV-1521			
C1525	1"	8#14 W/#14 GND	120VAC	LCP-1514	FV-1522			
C1526	1"	8#14 W/#14 GND	120VAC	LCP-1514	FV-1523			
C1531	1"	10#12 W/#12 GND	120VAC	RIO-SH	LCP-1531		303.1, 303.2	
C1611	1"	12#12	120VAC	RIO-HW	LCP-ME-1611		101, 104, 104.3	
C1631	1"	2#14 W/#14 GND	120VAC	LCP-ME-1611	LSL-1631			
C1711	1"	12#12	120VAC	RIO-HW	LCP-ME-1711		101, 105	
C1731	1"	2#14 W/#14 GND	120VAC	LCP-ME-1711	LSL-1731			
C1802	1"	4#12 W/#12 GND	24VDC	RIO-HW	JB-1801	S1801+	101, 101.2	
C1811	1"	6#12	120VAC	MCC-HW1	LCP-P-1811		101, 101.2	
C1812	1"	6#12	120VAC	MCC-HW2	LCP-P-1812		101, 101.2	
C1901	1"	2#14	24VAC	H-1901	H-1903			
C1902	1"	2#14	24VAC	H-1902	H-1904			
C1903	1"	T-STAT CABLE	24VAC	H-1903	T-STAT			
C1904	1"	T-STAT CABLE	24VAC	H-1904	T-STAT			
C2171	1"	10#12 W/#12 GND	120VAC	MCC-MB1	LCP-P-2171	C2171+	202, 204	
C2271	1"	10#12 W/#12 GND	120VAC	MCC-MB2	LCP-P-2271	C2171+	202, 204	
C2371	1"	10#12 W/#12 GND	120VAC	MCC-MB1	LCP-P-2371	C2371+	202, 204	
C2471	1"	10#12 W/#12 GND	120VAC	MCC-MB2	LCP-P-2471	C2371+	202, 204	
C2752	1.5"	16#12 W/#12 GND	120VAC	RIO-MB	LCP-2761		202, 204, 204.1	
C2752A	2"	MFR CABLES	120VAC	LCP-2761	LSL-2752, LSH-2752, LSHH-2752			
C2761	1"	10#12	120VAC	MCC-MB1	LCP-2761		202, 204, 204.1	
C2762	1"	10#12	120VAC	MCC-MB2	LCP-2761		202, 204, 204.1	
C3001	1"	8#14	120VAC	RIO-MB	CP-3001			
C3007	1"	4#14	24VDC	RIO-MB	PSL-3007			
C3112	1.25"	28#14 W/4#14 GND	120VAC	RIO-MB	LSH-3112, LSL-3112, FV-3151A, FV-3151B, FV-3171			
C3181	1"	10#14 W/#14 GND	120VAC	MCC-MB1	LCP-3181			
C3181A	1"	3#14 W/#14 GND	24VDC	LCP-3181	PSH-3181A			
C3181B	1"	3#14 W/#14 GND	24VDC	LCP-3181	PSH-3181B			
C3191	1"	8#14	120VAC	RIO-MB	FV-3181			
C3192	1"	10#12	120VAC	RIO-MB	SV-3192, 3292, 3392, 3492, 3592			
C3212	1.25"	28#14 W/4#14 GND	120VAC	RIO-MB	LSH-3212, LSL-3212, FV-3251A, FV-3251B, FV-3271			
C3281	1"	10#14 W/#14 GND	120VAC	MCC-MB1	LCP-3281			
C3281A	1"	3#14 W/#14 GND	24VDC	LCP-3281	PSH-3281A			
C3281B	1"	3#14 W/#14 GND	24VDC	LCP-3281	PSH-3281B			
C3291	1"	8#14	120VAC	RIO-MB	FV-3291			
C3312	1.25"	28#14 W/4#14 GND	120VAC	RIO-MB	LSH-3312, LSL-3312, FV-3351A, FV-3351B, FV-3371			
C3381	1"	10#14 W/#14 GND	120VAC	MCC-MB1	LCP-3381			
C3381A	1"	3#14 W/#14 GND	24VDC	LCP-3381	PSH-3381A			
C3381B	1"	3#14 W/#14 GND	24VDC	LCP-3381	PSH-3381B			
C3391	1"	8#14	120VAC	RIO-MB	FV-3391			
C3412	1.25"	28#14 W/4#14 GND	120VAC	RIO-MB	LSH-3412, LSL-3412, FV-3451A, FV-3451B, FV-3471			
C3481	1"	10#14 W/#14 GND	120VAC	MCC-MB1	LCP-3481			
C3481A	1"	3#14 W/#14 GND	24VDC	LCP-3481	PSH-3481A			
C3481B	1"	3#14 W/#14 GND	24VDC	LCP-3481	PSH-3481B			
C3491	1"	8#14	120VAC	RIO-MB	FV-3491			
C3512	1.25"	WIRE FUTURE	120VAC	RIO-MB	LSH-3512, LSL-3512, FV-3551A, FV-3551B, FV-3571			STUB UP AND CAP
C3581	1"	WIRE FUTURE	120VAC	MCC-MB1	LCP-3581			STUB UP AND CAP
C3581A	1"	WIRE FUTURE	24VDC	LCP-3581	PSH-3581A			STUB UP AND CAP
C3581B	1"	WIRE FUTURE	24VDC	LCP-3581	PSH-3581B			STUB UP AND CAP
C3591	1"	WIRE FUTURE	120VAC	RIO-MB	FV-3591			STUB UP AND CAP
C3802	1"	MFR CABLES	24VDC	LCP-3811	LSH-3802, LSL-3802			
C3811	1"	8#14 W/#14 GND	24VDC	RIO-MB	LCP-3811			
C3812	1.25"	27#14	120VAC	MCC-MB1	LCP-3811			
C3812A	1"	20#14 W/5#14 GND	120VAC	LCP-3811	SV-3812, 3822, 3832, 3842, 3852 FSL-3815, 3825, 3835, 3845, 3855			
C3822	1.25"	18#14	120VAC	MCC-MB2	LCP-3811			
C3882	3/4"	MFR CABLE	120VAC	LCP-3891	LSL-3892			
C3891	1"	2 14#14 W/#14 GND TC	120VAC	MCC-MB1, MCC-MB2	LCP-3891			THRU 120VAC CABLE TRAY
C3906	1"	2#12	120VAC	RIO-MB	H-3906			
C3907	3/4"	2#12 TC	120VAC	RIO-MB	H-3907			
C3910	3/4"	2#12 TC	120VAC	RIO-MB	H-3910			
C3912	1"	2#12	120VAC	RIO-MB	H-3912			
C3914	1"	T-STAT CABLE	24VAC	H-3960	H-3914			
C3915	1"	T-STAT CABLE	24VAC	H-3961	H-3915			
C3966	1"	2#14	24VAC	H-3960	H-3966			
C3967	1"	2#14	24VAC	H-3961	H-3967			
C4002	1"	6#14 W/#14 GND	120VAC	PLC-RO	LCP-4001			

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REVISIONS

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2	01/18/19	MPJ	BB	MPJ
3	10/11/19	MPJ	DCL	MPJ
4	06/07/21	MPJ	DCL	MPJ

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CONDUIT SCHEDULE 5

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10
C6411, C6411A DELETED

CONTROL CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED	DUCTBANKS	NOTES
C4002A	3/4"	MFR CABLES	120VAC	LCP-4001	LSH-4002, LSL-4002			
C5002	3/4"	2#14	120VAC	LI-5002	LCP-5061			
C5031	3"	1-12C#14 TC, 5-7C#14 TC	120VAC	RIO-MB	LCP-5031			THRU 120VAC CABLE TRAY
C5051	1.5"	4@#14 W/5#14 GND	120VAC	LCP-5031	FV-5051, 5052, 5053, 5054, 5055			
C5061	1"	12#12	120VAC	RIO-MB	LCP-5061		202, 206	
C5121	3"	1-12C#14 TC, 5-7C#14 TC	120VAC	RIO-MB	LCP-5121			THRU 120VAC CABLE TRAY
C5141	1.5"	4@#14 W/5#14 GND	120VAC	LCP-5121	FV-5141, 5142, 5143, 5144, 5145			
C5231	1"	2#12 W/#12 GND TC	120VAC	RIO-MB	LA-5231			THRU 120VAC CABLE TRAY
C5231A	1"	MFR CABLES	120VAC	LA-5231	LE-5231			
C5402	1"	4C#14 TC	24VDC	RIO-MB	FSH-5402			THRU SIGNAL CABLE TRAY
C5412	1"	4C#14 TC	24VDC	RIO-MB	FSH-5412			THRU SIGNAL CABLE TRAY
C5422	1"	4#14	24VDC	RIO-MB	FSH-5422	C5422~		
C5901	1"	4#12 W/#12 GND	24VDC	PLC-OC	FSH-5901		301, 302, 302.5	
C6103	1"	2#14 W/#14 GND	120VAC	LP-D	SCC-UV			
C6401	1"	6#12 W/#12 GND	120VAC	MCC-HW1	LCP-6401		102, 38, 108	
C6402	1"	6#12 W/#12 GND	120VAC	MCC-HW2	LCP-6401		102, 38, 108	
~~C6411~~	~~1.25"~~	~~18#14~~	~~120VAC~~	~~CP-6411 (VFD-P-6411, VFD-P-6412 (VFD-P-6413 FUTURE))~~	~~RIO-HW~~			
~~C6411A~~	~~1"~~	~~5#12 W/#12 GND~~	~~120VAC~~	~~CP-6411~~	~~LCP-6411~~	~~C6411~~	~~101, 105~~	
C7111	1"	10#12	120VAC	VFD-P-7111	LCP-P-7111		102, 38, 108	
C7112	1"	10#12	120VAC	VFD-P-7111	LCP-P-7112		102, 38, 108	
C7113	1"	10#12	120VAC	VFD-P-7111	LCP-P-7113		102, 38, 108	
C7211	1"	WIRE FUTURE	120VAC	FUTURE VFD-P-7211	FUTURE LCP-P-7211		103, 103.2	STUB UP AND CAP
C7212	1"	WIRE FUTURE	120VAC	FUTURE VFD-P-7212	FUTURE LCP-P-7212		103, 103.2	STUB UP AND CAP
C7213	1"	WIRE FUTURE	120VAC	FUTURE VFD-P-7213	FUTURE LCP-P-7213		103, 103.2	STUB UP AND CAP
C7406	1"	4#12 W/#12 GND	24VDC	RIO-HW	FSH-7406	C7406~	102, 38, 108	
C7431	1"	MFR CABLES	120VAC	LA-7531	LE-7431			
C7531	1"	2#12 W/#12 GND TC	120VAC	RIO-HW	LA-7531	C7406~	102, 38, 108	
C7531A	1"	MFR CABLES	120VAC	LA-7531	LE-7531			
C8101	1.5"	16#12 W/#12 GND	120VAC	MCC-HW1	LCP-8101	C8101~	103, 103.1	
C8101A	3/4"	6#12 W/3#12 GND	120VAC	LCP-8101	FSL-8101, SV-8101, PSH-8101			
C8102	1.5"	32#12 W/#12 GND	120VAC	MCC-HW2	LCP-8101	C8101~	103, 103.1	
C8102A	3/4"	6#12 W/3#12 GND	120VAC	LCP-8101	FSL-8102, SV-8102, PSH-8102			
C8103A	3/4"	6#12 W/3#12 GND	120VAC	LCP-8101	FSL-8103, SV-8103, PSH-8103			
C8203	N/A	4#12 W/#12 GND	24VDC	RIO-HW	JB-8202	S8202~	103, 103.1	
C8203A	1"	MFR CABLES	24VDC	JB-8202	LSH-8203, LSL-8203			
C8303	N/A	4#12 W/#12 GND	24VDC	RIO-HW	JB-8202	S8202~	103, 103.1	
C8303A	1"	MFR CABLES	24VDC	JB-8202	LSH-8303, LSL-8303			
C8411	1"	6#12	120VAC	RIO-HW	FV-8411	C8411~	103, 103.1	
C8411A	1"	2#14	120VAC	ME-8402	FV-8411			
C8412	1"	6#12	120VAC	RIO-HW	FV-8412	C8411~	103, 103.1	
C8412A	1"	2#14	120VAC	ME-8402	FV-8412			
C8511	2"	2#10 W/#12 GND, 20#12	120VAC	CP-ME-8511	LCP-ME-8511			
C8511A	2"	20#14	24VDC	CP-ME-8511	LCP-ME-8511			
C8511B	1"	WIRE FUTURE	120VAC	RIO-SH	LCP-ME-8511			
C8511C	3/4"	4#12	120VAC	LCP-ME-8511	ME-8511A			
C8511D	3/4"	4#12	120VAC	LCP-ME-8511	ME-8511B			
C8511E	3/4"	2#14 W/#14 GND	120VAC	LCP-ME-8511	SV-8511			
C8511F	3/4"	6#14 W/2#14 GND	24VDC	LCP-ME-8511	PSL-8511A, PSL-8511B, LSL-8511			
C8512	1"	6#14	120VAC	LCP-ME-8511	G-8512			
C8521	3/4"	4#14 W/2#14 GND	120VAC	LCP-ME-8511	SV-8521, SV-8522			
C8541	2"	2#10 W/#12 GND, 20#12	120VAC	CP-ME-8541	LCP-ME-8541			
C8541A	2"	20#14	24VDC	CP-ME-8541	LCP-ME-8541			
C8541B	1"	WIRE FUTURE	120VAC	RIO-SH	LCP-ME-8541			
C8541C	3/4"	4#12	120VAC	LCP-ME-8541	ME-8541A			
C8541D	3/4"	4#12	120VAC	LCP-ME-8541	ME-8541B			
C8541E	3/4"	2#14 W/#14 GND	120VAC	LCP-ME-8541	SV-8541			
C8541F	3/4"	6#14 W/2#14 GND	24VDC	LCP-ME-8541	PSL-8541A, PSL-8541B, LSL-8541			
C8542	1"	6#14	120VAC	LCP-ME-8541	G-8542			
C8551	3/4"	4#14 W/2#14 GND	120VAC	LCP-ME-8541	SV-8551, SV-8552			
C8571	2"	WIRE FUTURE	120VAC	CP-ME-8571	LCP-ME-8571			STUB UP AND CAP
C8571A	2"	WIRE FUTURE	24VDC	CP-ME-8571	LCP-ME-8571			STUB UP AND CAP
C8571B	1"	WIRE FUTURE	120VAC	RIO-SH	LCP-ME-8571			STUB UP AND CAP
C8603	1"	3#12	120VAC	RIO-SH	LCP-P-8603			
C8611	1"	6#14	120VAC	LCP-ME-8511	LCP-ME-8611			
C8612	1"	6#15	120VAC	LCP-ME-8541	LCP-ME-8612			
C8613	1"	WIRE FUTURE	120VAC	LCP-ME-8571	LCP-ME-8613			STUB UP AND CAP
C8631	1"	4#14 W/#14 GND	24VDC	RIO-SH	FSH-8631			
C8761	1"	4#14 W/#14 GND	120VAC	H-8761	H-8757			
C8762	1"	4#14 W/#14 GND	120VAC	H-8762	H-8758			
C8769	1"	PER MFR REQUIREMENTS	24VAC	H-8769	H-8770			
C8770	1"	PER MFR REQUIREMENTS	24VAC	H-8770	TSTAT			
C8771	1"	PER MFR REQUIREMENTS	24VAC	H-8771	H-8772			
C8772	1"	PER MFR REQUIREMENTS	24VAC	H-8772	TSTAT			
C9101	1"	20#14	120VAC	RIO-SH	LCP-SHDC			
C9101A	2"	40#14	120VAC	MCC-SH	LCP-SHDC			
C9101B	1"	8#12 W/3#12 GND	120VAC	LCP-SHDG	SSL-9101, ZS-9101, HS-9101			
C9102	1"	8#12 W/3#12 GND	120VAC	LCP-SHDG	SSL-9102, ZS-9102, HS-9102			
C9502	1"	8#12 W/3#12 GND	120VAC	LCP-SHDC	SSL-9602, ZS-9602, HS-9502			
C9503	1"	8#12 W/3#12 GND	120VAC	LCP-SHDC	SSL-9603, ZS-9603, HS-9503			
C9504	1"	8#12 W/3#12 GND	120VAC	LCP-SHDC	SSL-9604, ZS-9504			
C9611	1.5"	24#12	120VAC	RIO-SH	LCP-SHDG			
C9611A	1.25"	21#12 W/3#12 GND	120VAC	LCP-SHDG	ME-9611, ME-9612, ME-9613			
C40001-1	1"	4C#14 TC	24VDC	PLC-RO	RIO-RO1			THRU SIGNAL TRAY CABLE
C40001-2	1"	4C#14 TC	24VDC	PLC-RO	RIO-RO2			THRU SIGNAL TRAY CABLE
C40001-3	1"	4C#14 TC	24VDC	PLC-RO	RIO-RO3			THRU SIGNAL TRAY CABLE
C40001-4	1"	4C#14 TC	24VDC	PLC-RO	RIO-RO4			THRU SIGNAL TRAY CABLE
C40001-5	1"	4C#14 TC	24VDC	PLC-RO	RIO-RO5			THRU SIGNAL TRAY CABLE
C47201	1"	4C#14 TC	24VDC	PLC-RO	JB-0470			THRU SIGNAL TRAY CABLE
C47201A	1"	12C#14 TC	24VDC	PLC-RO	JB-0470			THRU SIGNAL TRAY CABLE
C47201B	1"	4#14	24VDC	JB-0470	FV-47201			
C47201C	3/4"	3#14 W/#14 GND TC	120VAC	PLC-RO	FV-47201			THRU SIGNAL TRAY CABLE
C47267	1"	2#14 W/#14 GND	24VDC	JB-0470	LSL-47267			
C47284	1"	4#14 W/#14 GND	120VAC	JB-0470	PP-47284			
C47284A	3/4"	2#12 W/#12 GND	120VAC	PP-47284	YS-47284			

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9	03/11/21	MPJ	DCL	MPJ
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CE-06

SIGNAL CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED	DUCTBANKS	NOTES
S5601	1"	1 TSP	SIGNAL	PLC-OC	LIT-5601		301, 302, 302.5	
S5701	1"	1 TSP	SIGNAL	PLC-OC	LIT-5701		301, 302, 302.7	
S5801	1"	1 TSP	SIGNAL	PLC-OC	LIT-5801		301, 302, 302.6	
S6104A	3/4"	1 TSP	SIGNAL	SCC-UV	AIT-6104			
S6104B	3/4"	MFR CABLE	SIGNAL	AIT-6104	AE-6104			
S6115A	3/4"	1 TSP	SIGNAL	PDC-6111	LOW LEVEL CONTROL BOX 1			
S6115B	3/4"	1 TSP	SIGNAL	LOW LEVEL CONTROL BOX 1	LSL-6115			
S6215A	3/4"	1 TSP	SIGNAL	PDC-6211	LOW LEVEL CONTROL BOX 2			
S6215B	3/4"	1 TSP	SIGNAL	LOW LEVEL CONTROL BOX 2	LSL-6215			
S6302	1"	1 TSP	SIGNAL	RIO-HW	ME-6302	S6302+	102, 38, 108	
S6410 DELETED	4"	2 TSP	SIGNAL	CP-6411	PIT-6410, PIT-6412	S1741+	101, 105	
S6411 DELETED	1.25"	6 TSP	SIGNAL	CP-6411 (VFD-P-6411, VFD-P-6412, (VFD-P-6413 FUTURE))	RIO-HW			
S6412	1"	1 TSP	SIGNAL	RIO-HW	PIT-6412	S6302+	102, 38, 108	
S6420	1"	2 PAIR TWSH	SIGNAL	RIO-HW	FIT-6420	S6302+	102, 38, 108	
S7101	1"	1 TSP, 4#12 W/#12 GND	SIGNAL	RIO-HW	LCP-7101	S6302+	102, 38, 108	
S7101A	1"	MFR CABLE	SIGNAL	LCP-7101	LT-7101			
S7102	1"	MFR CABLES	SIGNAL	LCP-7101	LSH-7102, LSL-7102			
S7122	1"	2 PAIR TWSH	SIGNAL	RIO-HW	FIT-7122	S6302+	102, 38, 108	
S7122A	1"	MFR CABLE	SIGNAL	FIT-7122	FE-7122			
S7131	1"	1 TSP	SIGNAL	RIO-HW	LIT-7131	S7131+	103, 103.1	
S7141	1"	1 TSP	SIGNAL	RIO-HW	LIT-7141	S7131+	103, 103.1	
S7151	1"	2 PAIR TWSH	SIGNAL	RIO-HW	FIT-7151	S6302+	102, 38, 108	
S7151A	1"	MFR CABLE	SIGNAL	FIT-7151	FE-7151			
S7201	1"	WIRE FUTURE	SIGNAL	RIO-HW	FUTURE RWD PUMPS		103, 103.2	
S7221	1"	WIRE FUTURE	SIGNAL	RIO-HW	FUTURE RWD PUMPS		103, 103.2	
S7222	1"	WIRE FUTURE	SIGNAL	RIO-HW	FUTURE RWD PUMPS		103, 103.2	
S7401	1"	1 TSP	SIGNAL	RIO-HW	LIT-7401	S7401+	102, 38, 108	
S7410	2"	4 PAIR TWSH, 15C#16	SIGNAL	RIO-HW	LCP-7410	S7401+	102, 38, 108	
S7472	1"	1 TSP, 2#12	SIGNAL	RIO-HW	LCP-7471, LIT-7472	S6302+	102, 38, 108	
S7501	1"	1 TSP	SIGNAL	RIO-HW	LIT-7501	S7401+	102, 38, 108	
S7511	1"	4 PAIR TWSH, 15C#16	SIGNAL	RIO-HW	LCP-7511	S7401+	102, 38, 108	
S8101	3/4"	1 TSP	SIGNAL	LCP-8101	TE-8101			
S8102	3/4"	1 TSP	SIGNAL	LCP-8101	TE-8102			
S8103	3/4"	1 TSP	SIGNAL	LCP-8101	TE-8103			
S8202	1"	1 TSP	SIGNAL	RIO-HW	LIT-8202	S7131+, S8302+	103, 103.1	
S8302	1"	1 TSP	SIGNAL	RIO-HW	LIT-8302	S7131+, S8302+	103, 103.1	
S8401	1"	2#14, 1 TSP, 1 CAT6 SHIELDED	SIGNAL	VFD-ME-8401	ME-8401			
S8402	1"	2#14, 1 TSP, 1 CAT6 SHIELDED	SIGNAL	VFD-ME-8402	ME-8402			
S8403	1"	2#14, 1 TSP, 1 CAT6 SHIELDED	SIGNAL	VFD-ME-8403	ME-8403			
S8433	1"	2 PAIR TWSH	SIGNAL	RIO-HW	FIT-8433	S7131+	103, 103.1	
S8433A	1"	MFR CABLE	SIGNAL	FIT-8433	FE-8433			
S8443	1"	2 PAIR TWSH	SIGNAL	RIO-HW	FIT-8443	S7131+	103, 103.1	
S8443A	1"	MFR CABLE	SIGNAL	FIT-8443	FE-8443			
S8501	1"	1 TSP, 2 PAIR TWSH	SIGNAL	RIO-SH	FV-8501, FIT-8502			
S8511	2"	8 TSP	SIGNAL	CP-ME-8511	LCP-ME-8511			
S8511A	1"	WIRE FUTURE	SIGNAL	RIO-SH	LCP-ME-8511			
S8511B	1"	4 TSP, 2-2 PAIR TWSH	SIGNAL	LCP-ME-8511	SE-8511A, SE-8511B, TT-8511A, TT-8511B, VT-8511A, VT-8511B			
S8531	1"	1 TSP, 2 PAIR TWSH SIGNAL	SIGNAL	RIO-SH	FV-8531, FV-8532			
S8541	2"	8 TSP	SIGNAL	CP-ME-8541	LCP-ME-8541			
S8541A	1"	WIRE FUTURE	SIGNAL	RIO-SH	LCP-ME-8541			
S8541B	1"	4 TSP, 2-2 PAIR TWSH	SIGNAL	LCP-ME-8541	SE-8541A, SE-8541B, TT-8541A, TT-8541B, VT-8541A, VT-8541B			
S8571	2"	8 TSP	SIGNAL	CP-ME-8571	LCP-ME-8571			
S8571A	1"	WIRE FUTURE	SIGNAL	RIO-SH	LCP-ME-8571			
S8601A	1"	1 TSP	SIGNAL	RIO-SH	LI-8601			
S8601B	1"	1 TSP	SIGNAL	RIO-SH	LIT-8601			
S8611	1"	2 TSP	SIGNAL	LCP-ME-8511	LCP-ME-8611			
S8612	1"	2 TSP	SIGNAL	LCP-ME-8541	LCP-ME-8612			
S8613	1"	WIRE FUTURE	SIGNAL	LCP-ME-8571	LCP-ME-8613			STUB UP AND CAP
S9621	1"	1 TSP	SIGNAL	RIO-SH	WIT-9621		303, 303.2	
S9621A	1"	MFR CABLE	SIGNAL	WIT-9621	WE-9621A			
S9621B	1"	MFR CABLE	SIGNAL	WIT-9621	WE-9621B			
S30074	1"	12#14 W/#14 GND TC, 2 PAIR TWSH TC	SIGNAL	PLC-RO	FIT-30074			THRU SIGNAL CABLE TRAY
S30094	1"	2 TSP CAT 6 SH, TC	SIGNAL	PLC-RO	AIT-30094, AIT-30095			THRU SIGNAL CABLE TRAY
S40045	3/4"	1 TSP TC	SIGNAL	PLC-RO	PT-40045			THRU SIGNAL CABLE TRAY
S47255	1"	3 TSP TC	SIGNAL	PLC-RO	JB-0470			THRU SIGNAL CABLE TRAY
S47258	1"	1 TSP	SIGNAL	JB-0470	TT-47258			
S47260	1"	1 TSP	SIGNAL	JB-0470	LT-47260			
S85001	3/4"	1 TSP	SIGNAL	PLC-RO	LIT-85001	S5002+		
S85100	2"	4 PAIR TWSH TC, 12C#14 TC	SIGNAL	PLC-RO	JB-85100			THRU SIGNAL CABLE TRAY
S85300	2"	4 PAIR TWSH TC, 12C#14 TC	SIGNAL	PLC-RO	JB-85300			THRU SIGNAL CABLE TRAY
S85501	3/4"	1 TSP	SIGNAL	PLC-RO	LIT-85501	S5002+		
S85600	2"	4 PAIR TWSH TC, 12C#14 TC	SIGNAL	PLC-RO	JB-85600			THRU SIGNAL CABLE TRAY
S85900	2"	4 PAIR TWSH TC, 12C#14 TC	SIGNAL	PLC-RO	JB-85900			THRU SIGNAL CABLE TRAY

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NOTES:

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2. THE CONDUIT DEVELOPMENT AND SCHEDULE DOES NOT SHOW CONDUIT AND CONDUCTORS FOR LIGHTS, RECEPTACLES AND DATA JACKS. IT ALSO DOESN'T SHOW CONDUIT AND CONDUCTORS FOR THE MBR BUILDING'S HVAC AND APPLIANCES FOR THE OFFICE, BREAK ROOM, CONTROL ROOM, LAB, MECHANICAL ROOM AND RESTROOMS. THE CONTRACTOR IS RESPONSIBLE TO INCLUDE THESE CONDUITS AND CONDUCTORS IN THEIR WORK AND IN THEIR SUBMITTED CONDUIT ROUTING PLAN.

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REVISIONS

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9	03/11/21	MPJ	DCL	MPJ
10	05/12/21	MPJ	BB	MPJ
11	06/07/21	MPJ	DCL	MPJ

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CONDUIT SCHEDULE 8

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CE-08

COMMUNICATIONS CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED	DUCTBANKS	NOTES
F0101	1"	2 SHIELDED CAT6	COMMS	SWGR-HW	CTC-HW			
F0102	1"	2 SHIELDED CAT6	COMMS	MCC-HW1	CTC-HW			
F0103	1"	2 SHIELDED CAT6	COMMS	MCC-HW2	CTC-HW			
F0104	1"	2 SHIELDED CAT6	COMMS	RIO-HW	CTC-HW			
F0105	2"	24-STRAND FIBER SM OSP	COMMS	CTC-HW	CTC-CB		102, 38	REUSE EXISTING CONDUITS PAST HH-38
F0106	2"	24-STRAND FIBER SM OSP	COMMS	CTC-HW	CTC-MB		103, 103.1, 107	
F0200	1"	SHIELDED CAT6	COMMS	SWGR-MB	CTC-MB			
F0201	1"	2 SHIELDED CAT6	COMMS	MCC-MB1	CTC-MB			
F0202	1"	2 SHIELDED CAT6	COMMS	MCC-MB2	CTC-MB			
F0203	1"	2 SHIELDED CAT6	COMMS	RIO-MB	CTC-MB			
F0204	1"	2 SHIELDED CAT6	COMMS	PLC-RO	CTC-MB			
F0205	2"	6-STRAND FIBER SM OSP	COMMS	CTC-MB	MVSWGR		203, 205, 205.1	
F0206	1"	2 SHIELDED CAT6	COMMS	CTC-MB	FIRE ALARM CONTROL PANEL			
F0300	4"	24-STRAND FIBER SM OSP	COMMS	CTC-MB	RIO-SH		202, 202.1	
F0301	1"	2 SHIELDED CAT6	COMMS	RIO-SH	MCC-SH			
F0302	1"	SHIELDED CAT6	COMMS	RIO-SH	PLC-OC			
F0303	1"	SHIELDED CAT6	COMMS	PLC-OC	MCC-SH			
F0400	2"	WIRE BY OTHERS	COMMS	CTC-MB	EXISTING TELEPHONE PEDESTAL		203, 205, 205.1	
F1101	1"	MODBUS CABLE	COMMS	EXISTING G-1101	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1101A	1"	MODBUS CABLE	COMMS	EXISTING G-1101	EXISTING G-1102			REUSE EXISTING CONDUIT & WIRE
F1102	1"	MODBUS CABLE	COMMS	EXISTING G-1102	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1111	1"	MODBUS CABLE	COMMS	EXISTING G-1111	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1112	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE CP-ME-1112			
F1112A	1"	SHIELDED CAT6	COMMS	EXISTING LCP-1161	EXISTING CP-ME-1112			REUSE EXISTING CONDUIT FROM CP-ME-1112 TO LCP-1161
F1113	1"	MODBUS CABLE	COMMS	EXISTING G-1112	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1122	1"	SHIELDED CAT6	COMMS	CTC-HW	CP-ME-1122			
F1151	1"	2 MODBUS CABLES	COMMS	EXISTING G-1151	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1151A	1"	MODBUS CABLE	COMMS	EXISTING G-1151	EXISTING G-1152			REUSE EXISTING CONDUIT & WIRE
F1152	1"	MODBUS CABLE	COMMS	EXISTING G-1152	EXISTING LCP-1161			REUSE EXISTING CONDUIT & WIRE
F1161	2"	12-STRAND SFIBER SM OSP	COMMS	CTC-HW	EXISTING LCP-1161		101, 104, 104.4	
F1172	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE CP-ME-1172			
F1172A	1"	SHIELDED CAT6	COMMS	EXISTING LCP-1161	EXISTING CP-ME-1172			REUSE EXISTING CONDUIT & WIRE
F1182	1"	SHIELDED CAT6	COMMS	CTC-HW	CP-ME-1182			
F1231	1"	SHIELDED CAT6	COMMS	CTC-HW	CP-1231			
F1413	1"	SHIELDED CAT6	COMMS	CTC-HW	CP-ME-1413			
F1423	1"	SHIELDED CAT6	COMMS	CTC-HW	CP-ME-1423			
F1433	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE CP-ME-1433			
F1471	3/4"	SHIELDED CAT6	COMMS	CTC-HW	CP-1471			
F2111	1"	CAT6 SH	COMMS	CTC-MB	JB-2111	F0203+, S2111+		
F2151	1"	CAT6 SH	COMMS	CTC-MB	JB-2131	F0203+, S2152+		
F2311	1"	CAT6 SH	COMMS	CTC-MB	JB-2311	F0203+, S2311+		
F2351	1"	CAT6 SH	COMMS	CTC-MB	JB-2331	F0203+, S2352+		
F2601	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-2601			
F2611	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-2611			
F2621	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-2621			
F2631	1"	WIRE FUTURE	COMMS	CTC-MB	LCP-ME-2631			
F3701	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-3701			
F3711	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-3711			
F3721	1"	SHIELDED CAT6	COMMS	CTC-MB	LCP-ME-3721			
F3731	1"	WIRE FUTURE	COMMS	CTC-MB	LCP-ME-3731			
F6111	2"	12-STRAND SFIBER SM OSP	COMMS	CTC-HW	SCC-UV		102, 1	REUSE EXISTING CONDUIT FROM HH-1A TO SCC-UV
F6111A	1"	BELDEN 9842 RS-485 CABLE	COMMS	PDC-6111	HSC-6121	F6111+, F6121+, F6211A+		
F6114	1"	WIRE FUTURE	COMMS	PDC-6114	PDC-6111	F6111+, F6211A+		
F6121	1"	BELDEN 9842 RS-485 CABLE	COMMS	JB-UV2	HSC-6121	F6121+, F6211A+		
F6211	1"	BELDEN 9842 RS-485 CABLE	COMMS	PDC-6211	HSC-6221	F6211+, F6221+, F6211A+		
F6214	1"	WIRE FUTURE	COMMS	PDC-6214	PDC-6211	F6211+, F6211A+		
F6221	1"	BELDEN 9842 RS-485 CABLE	COMMS	JB-UV2	HSC-6221	F6221+, F6211A+		
F7211	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE VFD-P-7211			
F7212	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE VFD-P-7212			
F7213	1"	WIRE FUTURE	COMMS	CTC-HW	FUTURE VFD-P-7213			
F7410	2"	6-STRAND FIBER SM OSP	COMMS	CTC-HW	HH-108, AIT-7472		102, 38, 108	
F8401	1"	SHIELDED CAT6	COMMS	CTC-HW	ME-8401	F8401+	103, 103.1	
F8402	1"	SHIELDED CAT6	COMMS	CTC-HW	ME-8402	F8401+	103, 103.1	
F8403	1"	SHIELDED CAT6	COMMS	CTC-HW	ME-8403	F8401+	103, 103.1	
F8511	1"	2 SHIELDED CAT6	COMMS	CP-ME-8511	LCP-ME-8511			
F8511A	1"	SHIELDED CAT6	COMMS	RIO-SH	LCP-ME-8511			
F8541	1"	2 SHIELDED CAT6	COMMS	CP-ME-8541	LCP-ME-8541			
F8541A	1"	SHIELDED CAT6	COMMS	RIO-SH	LCP-ME-8541			
F8571	1"	WIRE FUTURE	COMMS	CP-ME-8571	LCP-ME-8571			STUB UP AND CAP
F8571A	1"	WIRE FUTURE	COMMS	RIO-SH	LCP-ME-8571			STUB UP AND CAP
F40001-1	3/4"	SHIELDED CAT6 TC	COMMS	PLC-RO	RIO-RO1			THRU SIGNAL CABLE TRAY
F40001-2	3/4"	SHIELDED CAT6 TC	COMMS	PLC-RO	RIO-RO2			THRU SIGNAL CABLE TRAY
F40001-3	3/4"	SHIELDED CAT6 TC	COMMS	PLC-RO	RIO-RO3			THRU SIGNAL CABLE TRAY
F40001-4	3/4"	SHIELDED CAT6 TC	COMMS	PLC-RO	RIO-RO4			THRU SIGNAL CABLE TRAY
F40001-5	3/4"	SHIELDED CAT6 TC	COMMS	PLC-RO	RIO-RO5			THRU SIGNAL CABLE TRAY

F1471 ADDED 8

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3 SP0105 UPDATED

3 SP1311 UPDATED

3 CONDUITS REMOVED FROM SCHEDULE AND RE-PURPOSED FOR P1471+ (SP1412), C1471+ (SP1422) AND C1418 (SP1432)

SPARE CONDUIT

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED	DUCTBANKS	NOTES
SP0100	6"	PULL STRING	12KVAC	MVSWGR	XFMR-HW		201.2, 100	
SP0102	4"	PULL STRING	120VAC	STANDBY GENERATOR	SWGR-HW			
SP0103	4"	PULL STRING	480VAC	SWGR-HW	MCC-HW1			
SP0104	4"	PULL STRING	480VAC	SWGR-HW	MCC-HW2			
SP0105	4-2"	PULL STRING, 2 TSP	SIGNAL	HH-101A	HH-105A		105	
SP0105A	2"	PULL STRING	COMMS	CTC-HW	HH-3B		102, 38	
SP0106	2"	PULL STRING	COMMS	CTC-HW	CTC-MB		103, 103.1, 107	
SP0111	2-2"	PULL STRING	COMMS	CTC-HW	RIO-HW			
SP0113	4"	PULL STRING	480VAC	SWGR-HW	HH-3B		102, 38	
SP0114	3"	PULL STRING	480VAC	SWGR-HW	HH-1		102, 1	
SP0116	1"	PULL STRING	480VAC	DP-HW2	HH-103		103	
SP0200	1"	PULL STRING	120VAC	STANDBY GENERATOR	RIO-MB		201.6	
SP0201	1"	PULL STRING	120VAC	STANDBY GENERATOR	SWGR-MB		201.6	
SP0202	6"	PULL STRING	12KVAC	MVSWGR	XFMR-MB		201.2	
SP0215	2-2"	PULL STRING	COMMS	CTC-MB	RIO-MB			
SP0251	1"	PULL STRING	120VAC	LP-MB2	JB-2111		202, 204	
SP0253	1"	PULL STRING	120VAC	LP-MB2	JB-2311		202, 204	
SP0300	4"	PULL STRING	12KVAC	MVSWGR	SWBD-SH		300	
SP0300A	2-2"	PULL STRING	COMMS	CTC-MB	RIO-SH		202, 202.1	
SP0302	4"	PULL STRING	480VAC	SWBD-SH	MCC-SH			
SP0303	2-2"	PULL STRING	480VAC	SWBD-SH	HH-303		303.1	
SP0304	2-2"	PULL STRING	480VAC	MCC-EQ	HH-303		303.1	
SP0400	2"	PULL STRING	COMMS	CTC-MB	EXISTING PORTABLE OFFICE		205.1	STUB UP AND CAP NEAR BUILDING
SP0401	1"	PULL STRING	120VAC	MPC-PO	EXISTING GATE CONTROLLER		205.1	
SP0402	1"	PULL STRING	COMMS	CTC-MB	EXISTING GATE CONTROLLER		205.1	
SP1101	4-2"	PULL STRING	120VAC, 480VAC	HH-101	HH-50		104, 104.4	
SP1112	2"	PULL STRING	SIGNAL	HH-101A	HH-50		104	
SP1114	2"	PULL STRING	SIGNAL	HH-101A	HH-104A		104	
SP1161	1.5"	PULL STRING	120VAC	EXISTING LCP-1161	RIO-HW		101, 104, 104.4	
SP1202	2-2"	PULL STRING	120VAC, 480VAC	HH-101	HH-104		104	
SP1311	1"	PULL STRING	SIGNAL	RIO-HW	LCP-1311	SP1311+	101, 2	
SP1311A	1"	PULL STRING	120VAC	RIO-HW	LCP-1311		101, 2	
SP1311B	2-2"	PULL STRING	SIGNAL	HH-101A	HH-2A		2	
SP1311C	2-2"	PULL STRING	120VAC, 480VAC	HH-101	HH-2		2	
SP1311D	2"	PULL STRING	120VAC	HH-18	LCP-1311			
SP1412	2"	PULL STRING	120VAC	CP-ME-1413	HH-105		101, 105	
SP1422	2"	PULL STRING	120VAC	CP-ME-1423	HH-105		101, 105	
SP1442	2"	PULL STRING	120VAC	FUTURE CP-ME-1433	HH-105		101, 105	
SP1501	2-2"	PULL STRING	SIGNAL	RIO-SH	HH-303A		303.1	
SP1503	2"	PULL STRING	120VAC	RIO-SH	HH-303		303.1	
SP1511	2"	PULL STRING	120VAC	RIO-SH	LCP-1511		303.1, 303.3	
SP1514	2"	PULL STRING	120VAC	RIO-SH	LCP-1514		303.1, 303.3	
SP1711	1"	PULL STRING	120VAC	HH-101	LCP-ME-1711		101, 105	
SP2111	1"	PULL STRING	SIGNAL	RIO-MB	JB-2111		202, 204	
SP2171	1"	PULL STRING	480VAC	MCC-MB1	JB-2111		202, 204	
SP2152	1"	PULL STRING	120VAC	LP-MB2	JB-2131		203, 205	
SP2152A	1"	PULL STRING	120VAC	RIO-MB	JB-2131		203, 205	
SP2271	1"	PULL STRING	480VAC	MCC-MB2	JB-2311		202, 204	
SP2311	1"	PULL STRING	SIGNAL	RIO-MB	JB-2311		202, 204	
SP2371	1"	PULL STRING	480VAC	MCC-MB1	JB-2311		202, 204	
SP2352	1"	PULL STRING	120VAC	LP-MB2	JB-2331		203, 205	
SP2352A	1"	PULL STRING	120VAC	RIO-MB	JB-2331		203, 205	
SP2471	1"	PULL STRING	SIGNAL	MCC-MB2	JB-2311		202, 204	
SP2752	4-2"	PULL STRING	120VAC, 480VAC	HH-202	HH-204		204	
SP2764	4-2"	PULL STRING	SIGNAL	HH-202A	HH-204A		204	
SP4502	1"	PULL STRING	120VAC	LP-MB2	HH-205		203, 205	
SP4502A	2"	PULL STRING	SIGNAL	RIO-MB	HH-205A		203, 205	
SP5501	2-2"	PULL STRING	SIGNAL	PLC-OC	HH-302A		301, 302	
SP5501A	2-1"	PULL STRING	120VAC	LP-SH	HH-302		301, 302	
SP6111	2"	PULL STRING	COMMS	CTC-HW	HH-1A		102, 1	
SP6302A	1"	PULL STRING	120VAC	LP-HW1	HH-108		102, 38, 108	
SP7131	2"	PULL STRING	SIGNAL	RIO-HW	HH-103A		103	
SP7211	2"	PULL STRING	120VAC	FUTURE VFD-P-7211	FUTURE P-7211		103, 103.2	
SP7212	2"	PULL STRING	120VAC	FUTURE VFD-P-7212	FUTURE P-7212		103, 103.2	
SP7213	2"	PULL STRING	120VAC	FUTURE VFD-P-7213	FUTURE P-7213		103, 103.2	
SP8101	2"	PULL STRING	480VAC	MCC-HW1	HH-103		103	
SP8102	2"	PULL STRING	480VAC	MCC-HW2	HH-103		103	
SP9101	1"	PULL STRING	120VAC	RIO-SH	LCP-SHDC			
SP9111	2"	PULL STRING	120VAC	RIO-SH	LCP-SHDC			
SP9511	2"	PULL STRING	120VAC	RIO-SH	LCP-SHDG			

NOTES:

1. CONDUITS THAT ARE COMBINED BETWEEN PULL POINTS ARE DENOTED WITH A + (PLUS) SYMBOL. SEE THE COMBINED CONDUITS SCHEDULE ON SHEET CE-11. CONDUITS THAT HAVE BEEN COMBINED SHALL BE LABELED WITH MULTIPLE CONDUIT TAGS, ONE FOR EACH CONDUIT THAT HAS BEEN COMBINED.
2. THE CONDUIT DEVELOPMENT AND SCHEDULE DOES NOT SHOW CONDUIT AND CONDUCTORS FOR LIGHTS, RECEPTACLES AND DATA JACKS. IT ALSO DOESN'T SHOW CONDUIT AND CONDUCTORS FOR THE MBR BUILDING'S HVAC AND APPLIANCES FOR THE OFFICE, BREAK ROOM, CONTROL ROOM, LAB, MECHANICAL ROOM AND RESTROOMS. THE CONTRACTOR IS RESPONSIBLE TO INCLUDE THESE CONDUITS AND CONDUCTORS IN THEIR WORK AND IN THEIR SUBMITTED CONDUIT ROUTING PLAN.

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

1	08/14/19	MPJ	DCL	MPJ
2	10/11/19	MPJ	DCL	MPJ
3	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE

ELECTRICAL - CONDUITS AND DUCTBANKS

CONDUIT SCHEDULE 10

AQUA ENGINEERING G
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256
ENGINEERING CONSULTANTS

0 1/2 1
DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

CE-10

COMBINED CONDUITS

CONDUIT	SIZE	CONDUITS	SERVICE	FROM	TO	DUCTBANKS	NOTES
P0251+	1"	P0251, P2111, P2211	120VAC	LP-MB2	JB-0251	202, 204	
P0253+	1"	P0253, P2311, P2411	120VAC	LP-MB2	JB-0253	202, 204	
P1101+	2"	P1101, 1102, 1111, 1113, 1151, 1152	480VAC	DP-HW1	HH-80	101, 104, 104.4	PASSES THRU HH-101
P1311+	2"	P1311, C1311D	480VAC, 120VAC	HH-18	JB-P-1311		
P1312+	2"	P1312, C1312	480VAC, 120VAC	HH-18	JB-P-1312		
P1313+	2"	P1313, C1313	480VAC, 120VAC	HH-18	JB-P-1313		
P1314+	2"	P1314, C1314	480VAC, 120VAC	HH-18	JB-P-1314		
P1315+	2"	P1315, C1315	480VAC, 120VAC	HH-18	JB-P-1315		
P1321+	2"	P1321, P1322, P1343	480VAC	DP-HW1	HH-18	101, 2, 18	
P1332+	1"	P1332, P1342	120VAC	CP-HW2	HH-18	101, 2, 18	
P1501+	1"	P1501, P1502, P1541	120VAC	LP-SH	HH-303	303.1	
P2111+	1"	P2111, P2211	120VAC	JB-0251	JB-2211		
P2131+	1"	P2131, P2132	120VAC	JB-2151	JB-2131A		
P2151+	1"	P2131, P2132, P2151	120VAC	JB-2152	JB-2151		
P2152+	1.25"	P2131, P2132, P2151, P2152	120VAC	LP-MB2	JB-2152	203, 205	
P2231+	1"	P0252, P2231, P2232	120VAC	JB-2251	JB-2231		
P2251+	1.25"	P0252, P2231, P2232, P2251	120VAC	JB-2252	JB-2251		
P2252+	1.25"	P0252, P2231, P2232, P2251, P2252	120VAC	LP-MB2	JB-2252	203, 205	
P2311+	1"	P0254, P2311, P2411	120VAC	JB-0253	JB-2311		
P2331+	1"	P0254, P2331, P2332	120VAC	JB-2351	JB-2331A		
P2351+	1.25"	P0254, P2331, P2332, P2351	120VAC	JB-2352	JB-2351		
P2352+	1.25"	P0254, P2331, P2332, P2351, P2352	120VAC	LP-MB2	JB-2352	203, 205	
P2431+	1"	P2431, P2432	120VAC	JB-2451	JB-2431		
P2451+	1"	P2431, P2432, P2451	120VAC	JB-2452	JB-2451		
P2452+	1.25"	P2431, P2432, P2451, P2452	120VAC	LP-MB2	JB-2452	203, 205	
P6115+	3/4"	P6115, P6215	120VAC	LP-O	PB-UV		USES EXISTING AND NEW CONDUIT. SEE CE-19A
P6302+	1.5"	P6302, P6420, P7122, P7151, P7472	120VAC	LP-HW1	HH-108	102, 38, 108	
~~P6411A+~~	~~2"~~	~~P6411A~~	~~480VAC~~	~~CP-6411~~	~~HH-105~~	~~101, 105~~	~~CONDUIT WAS PREVIOUSLY SP1432~~
C1311D+	1.5"	C1311D, C1312, C1313, C1314, C1315	120VAC	LCP-1311	HH-18		
C1321+	1.5"	C1321, C1322, C1343	120VAC	LCP-1311	HH-18		
C1471+	2"	C1417, C1427, C1471	120VAC	CP-1471	HH-105	101, 105	CONDUIT WAS PREVIOUSLY SP1422
C1503+	1"	C1503, C1504	120VAC	RIO-SH	HH-303	303.1	
C2171+	1"	C2171, C2271	120VAC	HH-202	LCP-P-2271	204	
C2371+	1"	C2371, C2471	120VAC	HH-202	LCP-P-2371	204	
C3907+	1"	C3907, P3908, P3909	120VAC	H-3907	120VAC CABLE TRAY		
C3910+	1"	C3910, P3911	120VAC	H-3910	120VAC CABLE TRAY		
C5422+	1"	C5422, S5002A	24VDC/SIGNAL	RIO-MB	JB-5002	202, 206	
~~C6411+~~	~~2"~~	~~C6411A~~	120VAC	~~CP-6411 (VFD-P-6411, VFD-P-6412)~~	~~HH-105~~	~~101, 105~~	~~CONDUIT WAS PREVIOUSLY SP1422~~
C7406+	1"	C7406, C7531	120VAC	RIO-HW	HH-108A	102, 38, 108	
C8101+	2"	C8101, C8102	120VAC	MCC-HW1	LCP-8101	103, 103.1	
C8411+	2"	C8411, C8412	120VAC	RIO-HW	HH-103	103	
C9201+	1.5"	C9201, C9301, C9401, C9501	120VAC	HH-301	HS-9201A, 9301A, 9401A, 9501A	301.1	
C9201A+	1.5"	C9201A, C9301A, C9401A, C9501A	120VAC	HH-303	HS-9201B, 9301B, 9401B, 9501B	303.2	
S1332+	1"	S1332, S1342	SIGNAL	RIO-HW	HH-2A	101, 2	
S1501+	1"	S1501, S1502, S1541	SIGNAL	RIO-SH	HH-303A	303.1	
S1741+	2"	S1412, S1422, S1741, S1432, S6410	SIGNAL	HH-101A	HH-105A	105	
S1801+	1"	S1801, S1822, C1802	SIGNAL	RIO-HW	HH-101	101	
S2111+	1"	S2111, S2211, F2111	SIGNAL	RIO-MB	JB-2111A	202, 204	
S2131+	1"	S2131, S2132	SIGNAL	JB-2151	JB-2131A		
S2151+	1"	S2131, S2132, S2151	SIGNAL	JB-2152	JB-2151		
S2152+	1.25"	S2131, S2132, S2151, S2152, F2151	SIGNAL	RIO-MB	JB-2152	203, 205	
S2231+	1"	S2231, S2232	SIGNAL	JB-2251	JB-2231		
S2251+	1"	S2231, S2232, S2251	SIGNAL	JB-2252	JB-2251		
S2252+	1.25"	S2231, S2232, S2251, S2252	SIGNAL	RIO-MB	JB-2252	203, 205	
S2311+	1"	S2311, S2411, F2311	SIGNAL	RIO-MB	JB-2411	202, 204	
S2331+	1"	S2331, S2332	SIGNAL	JB-2351	JB-2331A		
S2351+	1"	S2331, S2332, S2351	SIGNAL	JB-2352	JB-2351		
S2352+	1.25"	S2331, S2332, S2351, S2352, F2351	SIGNAL	RIO-MB	JB-2352	203, 205	
S2431+	1"	S2431, S2432	SIGNAL	JB-2451	JB-2431		
S2451+	1"	S2431, S2432, S2451	SIGNAL	JB-2452	JB-2451		
S2452+	1.25"	S2431, S2432, S2451, S2452	SIGNAL	RIO-MB	JB-2452	203, 205	
S5002+	1"	S5002, S8500I, S8550I	SIGNAL	PLC-RO	JB-5002	202, 206	
S5002A+	3/4"	S5002, S5602A	SIGNAL	LI-5002	JB-5002		
S6302+	2"	S6302, S6412, S6420, S7101, S7122, S7151, S7472	SIGNAL	RIO-HW	HH-108A	102, 38, 108	
S7131+	2"	S7131, S7141, S8202, C8203, S8302, C8303, S8433, S8443	SIGNAL	RIO-HW	HH-103A	103	
S7401+	2"	S7401, S7410, S7501, S7511	SIGNAL	RIO-HW	HH-108A	102, 38, 108	
S8202+	1"	S8202, C8203	SIGNAL	HH-103A	JB-8202	103, 103.1	
S8302+	1"	S8302, C8303	SIGNAL	HH-103A	JB-8302	103, 103.1	
F0203+	1"	F0203, F2111, F2311, F2151, F2351	COMMS	CTC-MC	RIO-MB		
F6111+	1"	F6111A, F6114	COMMS	PDC-6111	UV TRAIN 1		
F6121+	1"	F6111A, F6121	COMMS	HSC-6121	UV TRAIN 1		
F6121A+	1"	F6111A, F6121, F6211, F6221	COMMS	JB-UV2	SCC-UV		
F6211+	1"	F6211, F6214	COMMS	PDC-6211	UV TRAIN 2		
F6221+	1"	F6211, F6221	COMMS	HSC-6221	UV TRAIN 2		
F8401+	2"	F8401, F8402, F8403	COMMS	CTC-HW	HH-103A	103	

P6411A+ DELETED (10)

C1471+ ADDED

C6411+ DELETED (10)

NOTES:

(1) CONDUITS THAT ARE COMBINED BETWEEN PULL POINTS ARE DENOTED WITH A + (PLUS) SYMBOL. SEE THE COMBINED CONDUITS SCHEDULE ON SHEET CE-11. CONDUITS THAT HAVE BEEN COMBINED SHALL BE LABELED WITH MULTIPLE CONDUIT TAGS, ONE FOR EACH CONDUIT THAT HAS BEEN COMBINED.

(2) THE CONDUIT DEVELOPMENT AND SCHEDULE DOES NOT SHOW CONDUIT AND CONDUCTORS FOR LIGHTS, RECEPTACLES AND DATA JACKS. IT ALSO DOESN'T SHOW CONDUIT AND CONDUCTORS FOR THE MBR BUILDING'S HVAC AND APPLIANCES FOR THE OFFICE, BREAK ROOM, CONTROL ROOM, LAB, MECHANICAL ROOM AND RESTROOMS. THE CONTRACTOR IS RESPONSIBLE TO INCLUDE THESE CONDUITS AND CONDUCTORS IN THEIR WORK AND IN THEIR SUBMITTED CONDUIT ROUTING PLAN.

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

7	12/07/20	MPJ	DCL	MPJ
8	03/11/21	MPJ	DCL	MPJ
9	05/12/21	MPJ	DCL	MPJ
10	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE

ELECTRICAL - CONDUITS AND DUCTBANKS

CONDUIT SCHEDULE 11

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

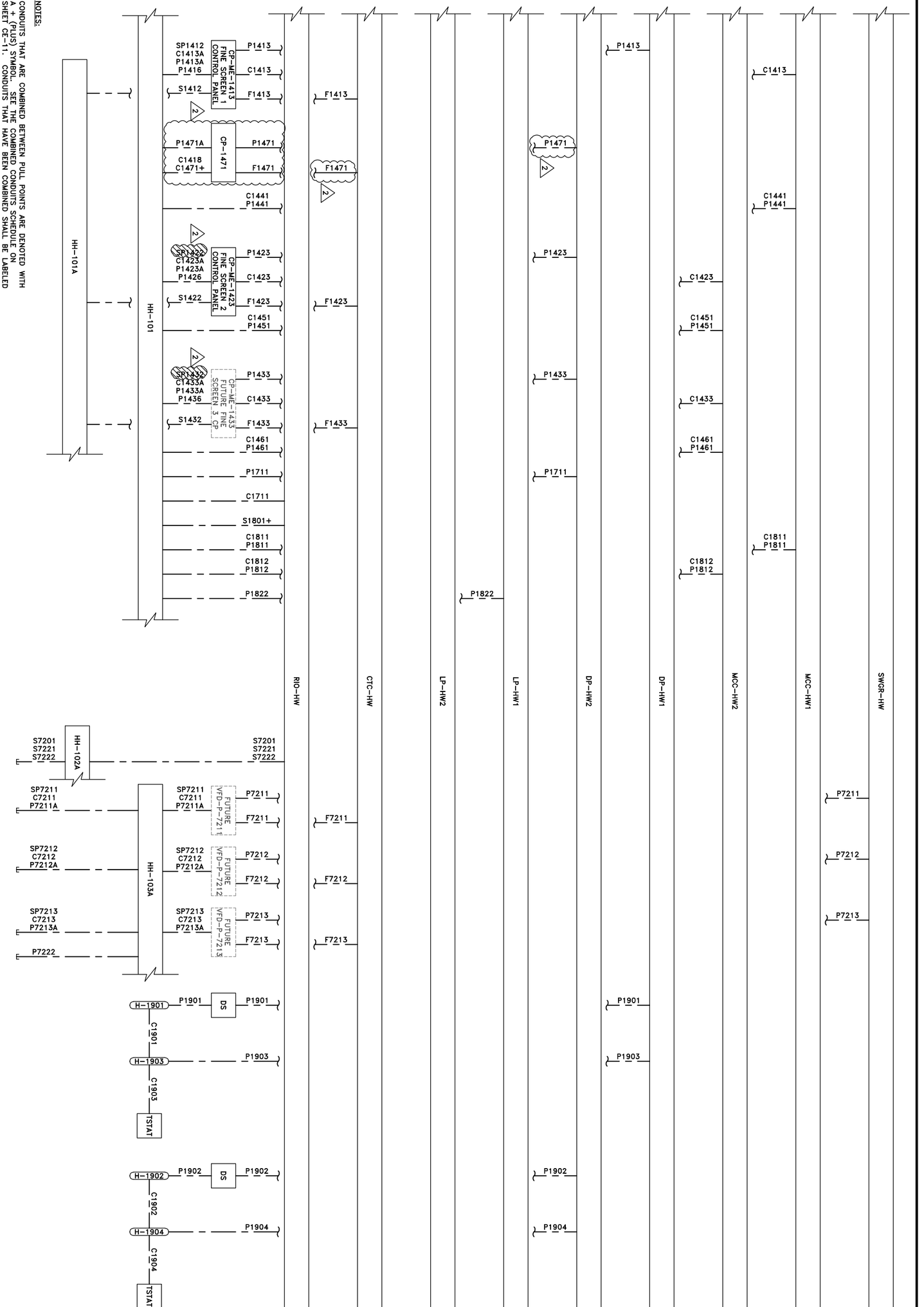
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256

0 1/2 1
DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

CE-11

NOTES:

1. CONDUITS THAT ARE COMBINED BETWEEN PULL POINTS ARE DENOTED WITH A + (PLUS) SYMBOL. SEE THE COMBINED CONDUITS SCHEDULE ON SHEET CE-171. CONDUITS THAT HAVE BEEN COMBINED SHALL BE LABELED WITH MULTIPLE CONDUIT TAGS; ONE FOR EACH CONDUIT THAT HAS BEEN COMBINED.
2. THE CONDUIT DEVELOPMENT AND SCHEDULE DOES NOT SHOW CONDUIT AND CONDUCTORS FOR LIGHTS, RECEPTACLES AND DATA JACKS. IT ALSO DOESN'T SHOW CONDUIT AND CONDUCTORS FOR THE MBR BUILDING'S HVAC, PLUMBING, ELECTRICAL CONTROLS, BREAK ROOM, LAB, MECHANICAL ROOM AND RESTROOMS. THE CONTRACTOR IS RESPONSIBLE TO INCLUDE THESE CONDUITS AND CONDUCTORS IN THEIR WORK AND IN THEIR SUBMITTED CONDUIT ROUTING PLAN.



skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

CE-16

SHEET 158 OF 172

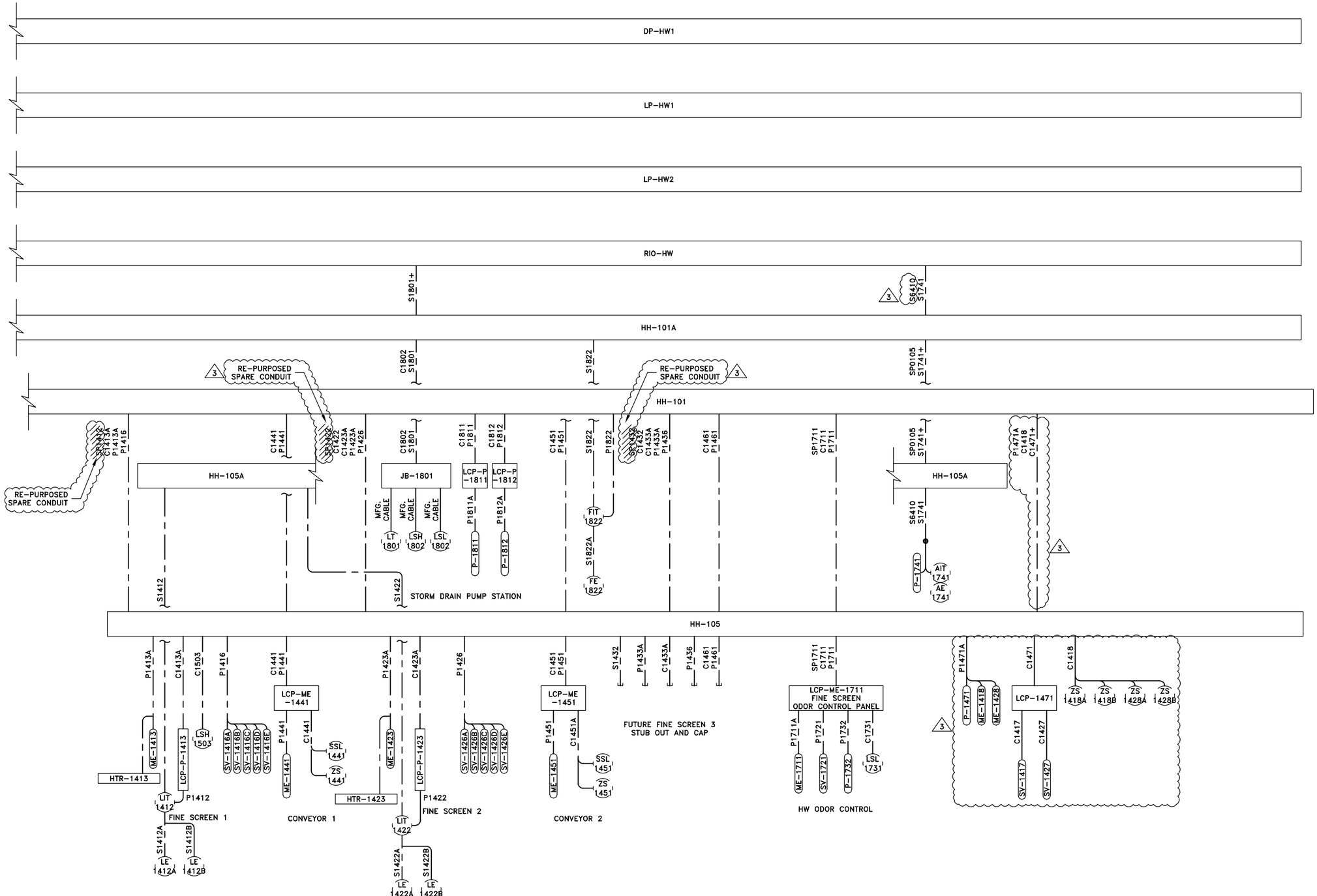
ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
CIVIL ENGINEERS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - CONDUITS AND DUCTBANKS
CONDUIT DEVELOPMENT 5

ORIGINAL				
NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ
REVISIONS				
1	11/26/18	MPJ	BB	MPJ
2	06/07/21	MPJ	DCL	MPJ



NOTES:

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6/25/2021 C:\USERS\DANIEL.LEAVITT\AQUA ENGINEERING\BEAUMONT - DOCUMENTS\WEBB170227 SALT MITIGATION WWTP UPGRADE\050 DRAFTING\997 ELECTRICAL\15 CE-18 CONDUIT DEVELOPMENT 7.DWG

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	MPJ	DCL	MPJ

REVISIONS

1	11/26/18	MPJ	BB	MPJ
2	10/11/19	MPJ	DCL	MPJ
3	06/07/21	MPJ	DCL	MPJ

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
ELECTRICAL - CONDUITS AND DUCTBANKS
CONDUIT DEVELOPMENT 7

AQUA ENGINEERING
533 W. 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

skm
533 W 2600 S, Suite 25
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ENGINEERING CONSULTANTS

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

SHEET 160 OF 172

CE-18

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name Salt Mitigation Upgrade Project Project No. 551173
Phase Code 9901003400 Date 10-08-2020

DESCRIPTION OF WORK

Relocate Samson AT Fine Screens.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Martin Bannena	FM	5	1/2		
Federico M. del Campo	Lab	5	1/2		

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17215	1	5	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CLAR-34
Acknowledgement of Time, Material & Labor

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title _____ Date 11/17/20

W.M. Lyles Co.
Signature _____
Print Name Adam Monroe
Title PM Date 11/6/20

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name SAlT MiTigATION Upgrade ProJect Project No. 551173
Phase Code 990100330 Date 10-22-2020

DESCRIPTION OF WORK

INSTALL PVC Pipe AND PuMp (Temporary) AT FiNe ScReeNS TO IncReAse The PRessure ON The HPW LINE THAT FEEDS The FiNe SCReeNS EquipMENT

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ErNesto Velasquez	FM	4	2 1/2		
JAiMe PANTOJA	LAb	1	2 1/2		
Jose MeNdozA	LAb	4	2 1/2		

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17230	1	4	
Job TRUCK	15182	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CLAR-36.1

CUSTOMER
Signature [signature]
Print Name Charles Reynolds
Title
Date 12/24/20

W.M. Lyles Co.
Signature [signature]
Print Name [illegible] Mendoza
Title PM
Date 1/6/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name SALT Mitigation Upgrade Project Project No. 551173
Phase Code 99010 0330 Date 10-23-2020

DESCRIPTION OF WORK

INSTALL Pressure Release Valve on the TEMPORAY PVC LINE INSTALLED AT FINE SCREENS FOR the NPW.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
ERNESTO Velasquez	FM	2			
Jose Mendoza	LAB	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17230	1	2	
Job Truck	15182	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CCAR-36

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title _____ Date 12/24/20

W.M. Lyles Co.
Signature _____
Print Name _____
Title PM Date 1/6/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name Salt Mitigation Upgrade Project Project No. 551173
Phase Code 99010033D Date 11-16-2020

DESCRIPTION OF WORK

Fix pump leak located at fine screens (Temporary Pump)

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Martin Barrena	FM	3			
Joe Constante	Lab	3			
Federico Martin del C.	Lab	3			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17215	1	3	
Job Truck	15184	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER
CLAR-36.1

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title _____ Date 12/24/20

W.M. Lyles Co.
Signature _____
Print Name Oscar Monroy
Title PM Date 11/6/24

Receipt

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Purchase Order	**1022ACAYAMA**
Paid	**$575.93**
Invoice	**47567367**
Invoice Date	**10/22/20**

Billed to

W M LYLES CO
P O BOX 4377
FRESNO CA 93744

Shipped to

Attention: Armando Cayama
W M Lyles Co
Office Trailer
715 W 4TH St
Beaumont CA 92223-2674

Mailing Address

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 89702600

Armando Cayama placed this order.

Line		Product	Ordered	Shipped	Balance	Price	Total
1	4702K62	ASME-Code Fast-Acting Pressure-Relief Valve for Hot Water, 2 NPT Female, Set At 125 PSI	1 Each	1	0	487.92 Each	487.92
2	4881K116	Thick-Wall PVC Plastic Pipe Fitting for Water, Tee Connector, 2 Pipe Size Socket-Connect Female	1 Each	1	0	13.72 Each	13.72
3	4882K918	Thick-Wall Dark Gray PVC Pipe Nipple for Water, Threaded on Both Ends, 2 NPT, 12" Long	1 Each	1	0	16.04 Each	16.04
4	4881K76	Thick-Wall PVC Plastic Pipe Fitting for Water, Straight Connector, 2 Size Socket-Connect Female	2 Each	2	0	5.46 Each	10.92

Merchandise	528.60
Sales Tax	40.97
Shipping	17.75
Total	$587.32
Invoice Deduction	(11.39)
Payment Received 11/9/20	(575.93)
Balance Due	$0.00

Packing List	Shipped	Weight	Carrier	Tracking	
4977070-01	10/22/20	24 lb	FedEx	917446857493	Received by R.Aqndo 10/23/20.
4977070-02	10/22/20	4 lb	UPS	1Z0526590102694741	Received by ID Verified 10/23/20.

McMASTER-CARR

Receipt

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Purchase Order	**1020ACAYAMA**
Paid	**$896.77**
Invoice	**47416861**
Invoice Date	**10/20/20**

Billed to

W M LYLES CO
P O BOX 4377
FRESNO CA 93744

Shipped to

Attention: Armando Cayama
W M Lyles Co
Office Trailer
715 W 4TH St
Beaumont CA 92223-2674

Mailing Address

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 89702600

Armando Cayama placed this order.

Line		Product	Ordered	Shipped	Balance	Price	Total
1	4881K117	Thick-Wall PVC Plastic Pipe Fitting for Water, Tee Connector, 3 Pipe Size Socket-Connect Female	2 Each	2	0	18.64 Each	37.28
2	4881K77	Thick-Wall PVC Plastic Pipe Fitting for Water, Straight Connector, 3 Size Socket-Connect Female	6 Each	6	0	13.55 Each	81.30
3	8516T238	Oil-Resistant Compressible Buna-N Gasket with Bolt Holes, for 3 Pipe Size, ANSI 150, 1/8" Thick	3 Each	3	0	3.41 Each	10.23
4	45805K72	Quick-Set Pressure-Regulating Valve for Water, 2 NPT Female Inlet x Outlet	1 Each	1	0	489.79 Each	489.79
5	4881K136	Thick-Wall PVC Plastic Pipe Fitting for Water, Reducer, 3 Socket-Connect Female x 2 Socket-Connect Female	2 Each	2	0	20.53 Each	41.06
6	4882K918	Thick-Wall Dark Gray PVC Pipe Nipple for Water, Threaded on Both Ends, 2 NPT, 12" Long	2 Each	2	0	16.04 Each	32.08
7	4876K27	PVC On/Off Valve for Drinking Water, PTFE/HDPE Seat, 3 Socket-Weld Female, Dark Gray	1 Each	1	0	107.24 Each	107.24
8	3115T22	Strut-Mount Metal Routing Clamp, Zinc-Plated Steel, 3-1/2" ID, 7/64" Thick	6 Each	6	0	2.44 Each	14.64

Merchandise	813.62
Sales Tax	63.06
Shipping	20.09
Total	$896.77
Payment Received 11/9/20	(896.77)
Balance Due	$0.00

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Receipt

Purchase Order	**1020ACAYAMA**
Invoice	**47416861**
Invoice Date	**10/20/20**

Packing List	Shipped	Weight	Carrier	Tracking	
4831984-01	10/20/20	5 lb	FedEx	917446696819	Received by R.Camaya 10/21/20.
4831984-02	10/20/20	29 lb	UPS	1Z0526590102690601	Received by ID Verified 10/21/20.

Receipt

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Purchase Order	**1020ACAYAMA**
Paid	**$83.65**
Invoice	**47411292**
Invoice Date	**10/20/20**

Billed to

W M LYLES CO
P O BOX 4377
FRESNO CA 93744

Shipped to

Attention: Armando Cayama
W M Lyles Co
Office Trailer
715 W 4TH St
Beaumont CA 92223-2674

Mailing Address

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 89702600

Armando Cayama placed this order.

Line		Product	Ordered	Shipped	Balance	Price	Total
2	4881K651	Thick-Wall PVC Plastic Pipe Fitting for Water, Bushing Reducing Adapter, 3 Socket Male x 1 Socket Female	1 Each	1	0	15.13 Each	15.13
3	4596K314	Thick-Wall Plastic Pipe Fitting for Water, Bushing Reducing Adapter, 1 Socket Male x 1/4 NPT Female	1 Each	1	0	6.28 Each	6.28
4	4881K663	Thick-Wall PVC Plastic Pipe Fitting for Water, Bushing Reducing Adapter, 3 Socket Male x 2 Socket Female	1 Each	1	0	15.85 Each	15.85
5	4881K26	Thick-Wall PVC Plastic Pipe Fitting for Water, Short 90 Degree Elbow Connector, 2 Socket Connect Female	4 Each	4	0	4.40 Each	17.60
6	4882K918	Thick-Wall Dark Gray PVC Pipe Nipple for Water, Threaded on Both Ends, 2 NPT, 12" Long	1 Each	1	0	16.04 Each	16.04

Merchandise	70.90
Sales Tax	5.49
Shipping	7.26
Total	$83.65
Payment Received 11/9/20	(83.65)
Balance Due	$0.00

Packing List	Shipped	Weight	Carrier	Tracking	
4839622-02	10/20/20	5 lb	UPS	1Z0526590102691708	Received by ID Verified 10/21/20.

Receipt

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Purchase Order	**1020ACAYAMA**
Paid	**$48.21**
Invoice	**47468651**
Invoice Date	**10/21/20**

Billed to

W M LYLES CO
P O BOX 4377
FRESNO CA 93744

Shipped to

Attention: Armando Cayama
W M Lyles Co
Office Trailer
715 W 4TH St
Beaumont CA 92223-2674

Mailing Address

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 89702600

Armando Cayama placed this order.

Line		Product	Ordered	Shipped	Balance	Price	Total
1	4881K117	Thick-Wall PVC Plastic Pipe Fitting for Water, Tee Connector, 3 Pipe Size Socket-Connect Female	2 Each	2	0	18.64 Each	37.28

Merchandise	37.28
Sales Tax	2.89
Shipping	8.04
Total	$48.21
Payment Received 11/9/20	(48.21)
Balance Due	$0.00

Packing List	Shipped	Weight	Carrier	Tracking	
4839622-01	10/21/20	5 lb	FedEx	917446712256	Received by R.Aqndo 10/23/20.

Receipt

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

Purchase Order	**1006ACAYAMA**
Paid	**$852.68**
Invoice	**46654750**
Invoice Date	**10/6/20**

Billed to

W M LYLES CO
P O BOX 4377
FRESNO CA 93744

Shipped to

Attention: Armando Cayama
W M Lyles Co
Office Trailer
715 W 4TH St
Beaumont CA 92223-2674

Mailing Address

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 89702600

Armando Cayama placed this order.

Line		Product	Ordered	Shipped	Balance	Price	Total
1	48855K43	Thick-Wall Dark Gray PVC Pipe for Water, Unthreaded, 8 Pipe Size, 5 Feet Long	1 Each	1	0	133.29 Each	133.29
2	4881K973	Thick-Wall PVC Plastic Pipe Fitting for Water, Fixed Flange Cap, 8 Pipe Size	2 Each	2	0	134.67 Each	269.34
3	4881K224	Thick-Wall PVC Plastic Pipe Fitting for Water, Flanged 8 Pipe Size Socket-Connect Adapter	4 Each	4	0	87.51 Each	350.04

Merchandise	752.67
Sales Tax	58.33
Shipping	41.68
Total	$852.68
Payment Received 11/9/20	(852.68)
Balance Due	$0.00

Packing List	Shipped	Weight	Carrier	Tracking	
4117102-01	10/6/20	47 lb	UPS	1Z0526590102672434	Received by Armando 10/7/20.
4117102-02	10/6/20	48 lb	UPS	1Z0526590102672443	Received by Armando 10/7/20.

United Rentals

BRANCH LAX
5500 RAWLINGS AVE
SOUTH GATE CA 90280-7412
562-904-3680
562-904-1583 FAX

RENTAL RETURN INVOICE

187430184-001

Job Site

BEAUMONT WASTE WATER FACILITY
715 W FOURTH ST
BEAUMONT CA 92223-2674

Office: 559-441-1900 **Cell:** 610-565-6064

WM LYLES CO
PO BOX 4377
FRESNO CA 93744-4377

RECEIVED
NOV 13 2020
By

Customer #	: 416065
Invoice Date	: 11/05/20
Rental Out	: 10/26/20 03:00 PM
Rental In	: 11/02/20 03:00 PM
UR Job Loc	: 715 4TH ST, BEAUMONT
UR Job #	: BEAUMONT WASTE WATER
Customer Job ID:	
P.O. #	: TBD
Ordered By	: ROBERT BECK
Reserved By	: NATHAN GETZ
Salesperson	: NATHAN GETZ

Invoice Amount: $1,834.03

Terms: Due Upon Receipt
Payment options: Contact our credit office 704-916-4843
REMIT TO: UNITED RENTALS (NORTH AMERICA),INC.
FILE 51122
LOS ANGELES CA 90074-1122

RENTAL ITEMS:

Qty	Equipment	Description	Minimum	Day	Week	4 Week	Amount
1	PU60145SA	PUMP 6" DBA-SILENCER VAC ASSIST - DIESEL Make: BAKERCORP Model: DP66LS-CK74AT Serial: 213665 Meter out: 1055.50 Meter in: 1079.90 Substituted for: PUMP 6" VAC ASSIST - DIESEL camlock fittings on pump ends		250.00	650.00	1850.00	650.00
2	537/6620	HOSE 6X50 LAYFLAT DISCHARGE - CAMLOCK 100' total		45.00	90.00	270.00	180.00
2	537/2720	HOSE 6X20 TANK TRUCK - CAMLOCK		40.00	80.00	200.00	160.00
1	545/6628	STRAINER 6"		5.00	15.00	30.00	15.00
1	537/1920	HOSE 6X10 RUBBER SUCTION - CAMLOCK		20.00	40.00	100.00	40.00
						Rental Subtotal:	1,045.00

SALES/MISCELLANEOUS ITEMS:

Qty	Item		Price	Unit of Measure	Extended Amt.
1	CA PERSONAL PROP TAX REIMB CHARGE	[DRSURCA/MCI]	7.837	EACH	7.84
1	ENVIRONMENTAL SERVICE CHARGE	[ENV/MCI]	13.000	EACH	13.00
1	DELIVERY CHARGE		330.000	EACH	330.00
1	PICKUP CHARGE		330.000	EACH	330.00
				Sales/Misc Subtotal:	680.84
				Agreement Subtotal:	1,725.84
				Tax:	108.19
				Total:	1,834.03

COMMENTS/NOTES:

CONTACT: ROBERT BECK
CELL#: 951-858-3060
CONTACT: ROBERT BECK
CELL#: 951-858-3060

ARE YOU OR YOUR EMPLOYEES IN NEED OF OPERATOR CERTIFICATION TRAINING?
CONTACT UNITED ACADEMY TODAY 844-222-2345 OR WWW.UNITEDACADEMY.UR.COM
TRAINING IS NOT AVAILABLE ON CERTAIN EQUIPMENT IN CANADA.

United Rentals

BRANCH LAX
5500 RAWLINGS AVE
SOUTH GATE CA 90280-7412
562-904-3680
562-904-1583 FAX

RENTAL RETURN INVOICE

185005996-004

Job Site

WATER TREATMENT PLANT
715 W FOURTH ST
BEAUMONT CA 92223-2674

Office: 559-441-1900 **Cell:** 951-858-3060

Customer #	: 416065
Invoice Date	: 10/30/20
Rental Out	: 08/19/20 08:00 AM
Rental In	: 09/29/20 08:00 AM
UR Job Loc	: 715 W FOURTH ST, BEA
UR Job #	: 195
Customer Job ID:	
P.O. #	: 551173
Ordered By	: ROBERT BECK
Reserved By	: YULIANA REYES
Salesperson	: NATHAN GETZ

35-1.97-30296F21.p01 626126820 1-9 0

WM LYLES CO
PO BOX 4377
FRESNO CA 93744-4377

Invoice Amount: $755.62

Terms: Due Upon Receipt
Payment options: Contact our credit office 704-916-4843
REMIT TO: UNITED RENTALS (NORTH AMERICA),INC.
FILE 51122
LOS ANGELES CA 90074-1122

RENTAL ITEMS:

Qty	Equipment	Description	Minimum	Day	Week	4 Week	Amount
1	PU60114	PUMP 6" VAC ASSIST - DIESEL Make: BAKERCORP Model: DP66LS-CK74OT Serial: 206460 Meter out: 1292.40 Meter in: 1395.20		305.00	755.00	1850.00	305.00
3	537/6620	HOSE 6X50 LAYFLAT DISCHARGE - CAMLOCK		60.00	120.00	275.00	180.00
2	537/2720	HOSE 6X20 TANK TRUCK - CAMLOCK		40.00	80.00	200.00	80.00
1	545/6628	STRAINER 6"		5.00	15.00	30.00	5.00
6	537/1920	HOSE 6X10 RUBBER SUCTION - CAMLOCK * ADDED FROM CONTRACT# 185138100 *		20.00	40.00	100.00	120.00
						Rental Subtotal:	690.00

SALES/MISCELLANEOUS ITEMS:

Qty	Item		Price	Unit of Measure	Extended Amt.
1	CA PERSONAL PROP TAX REIMB CHARGE	[DRSURCA/MCI]	5.174	EACH	5.17
1	ENVIRONMENTAL SERVICE CHARGE	[ENV/MCI]	6.100	EACH	6.10
				Sales/Misc Subtotal:	11.27
				Agreement Subtotal:	701.27
				Tax:	54.35
				Total:	755.62

COMMENTS/NOTES:

CONTACT: ROBERT BECK
CELL#: 951-858-3060

Final Bill: 1 Day From 9/28/20 08:00 AM Thru 9/29/20 08:00 AM

ARE YOU OR YOUR EMPLOYEES IN NEED OF OPERATOR CERTIFICATION TRAINING?
CONTACT UNITED ACADEMY TODAY 844-222-2345 OR WWW.UNITEDACADEMY.UR.COM
TRAINING IS NOT AVAILABLE ON CERTAIN EQUIPMENT IN CANADA.

9.1.3666 2 MB 0.436 36613S21.p01 187924 5-5 0

United Rentals

BRANCH LAX
5500 RAWLINGS AVE
SOUTH GATE CA 90280-7412
562-904-3680
562-904-1583 FAX

RENTAL RETURN INVOICE

188121029-001

Job Site

BEAUMONT WASTE WATER FACILITY
715 W FOURTH ST
BEAUMONT CA 92223-2674

Office: 559-441-1900 **Cell:** 610-565-6064

WM LYLES CO
PO BOX 4377
FRESNO CA 93744-4377

Customer #	: 416065
Invoice Date	: 11/18/20
Rental Out	: 11/13/20 07:00 AM
Rental In	: 11/13/20 01:00 PM
UR Job Loc	: 715 4TH ST, BEAUMONT
UR Job #	: BEAUMONT WASTE WATER
Customer Job ID:	
P.O. #	: 55.1173
Ordered By	: OSCAR
Reserved By	: NATHAN GETZ
Salesperson	: NATHAN GETZ

Invoice Amount: $1,046.94

Terms: Due Upon Receipt
Payment options: Contact our credit office 704-916-4843
REMIT TO: UNITED RENTALS (NORTH AMERICA),INC.
FILE 51122
LOS ANGELES CA 90074-1122

RENTAL ITEMS:

Qty	Equipment	Description	Minimum	Day	Week	4 Week	Amount
1	10850635	PUMP 6" DBA-SILENCER VAC ASSIST - DIESEL Make: CORNELL Model: MTP6DZD Serial: 3003512628 Meter out: 976.90 Meter in: 981.80 Substituted for: PUMP 6" VAC ASSIST - DIESEL	250.00	250.00	650.00	1850.00	250.00
	Camlock						
3	537/6620	HOSE 6X50 LAYFLAT DISCHARGE - CAMLOCK	45.00	45.00	90.00	270.00	135.00
3	537/2920	HOSE 6X20 RUBBER SUCTION - CAMLOCK	32.00	32.00	64.00	192.00	96.00
						Rental Subtotal:	481.00

SALES/MISCELLANEOUS ITEMS:

Qty	Item		Price	Unit of Measure	Extended Amt.
1	CA PERSONAL PROP TAX REIMB CHARGE	[DRSURCA/MCI]	3.607	EACH	3.61
1	ENVIRONMENTAL SERVICE CHARGE	[ENV/MCI]	5.000	EACH	5.00
1	DELIVERY CHARGE		250.000	EACH	250.00
1	PICKUP CHARGE		250.000	EACH	250.00
				Sales/Misc Subtotal:	508.61
				Agreement Subtotal:	989.61
				Tax:	57.33
				Total:	1,046.94

COMMENTS/NOTES:

CONTACT: OSCAR
CELL#: 951-757-5282
CALL OSCAR30 MINUTES OUT 619-565-6064
. SITE IS A LITTLE TOUGH TO FIND
OSCAR - 619-565-6064

ARE YOU OR YOUR EMPLOYEES IN NEED OF OPERATOR CERTIFICATION TRAINING?
CONTACT UNITED ACADEMY TODAY 844-222-2345 OR WWW.UNITEDACADEMY.UR.COM
TRAINING IS NOT AVAILABLE ON CERTAIN EQUIPMENT IN CANADA.

Invoice

xylem
Let's Solve Water

godwin FLYGT

Sold by:

Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

Cust. No.	Invoice Date	Invoice No.
00015587	10-23-2020	401045877

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
Salt Mitigation / Fine Screens Start-Up
715 W 4th Street
Beaumont, CA 92223

Customer PO	Ordered By	Contract Date	Service Contract #	Sales Representative	Order Taken By	Payment Terms
55.1173	Mr. Oscar Mendoza	10-22-2020	217011580	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	UNIT AMOUNT	EXTENDED AMOUNT
		Comments Provided laborer/technician 10/22 and 10/23/20, to provide start-up services for the Salt Mitigation / Fine Screens Project in Beaumont, CA. This invoice includes 3 hours of no charge standby time on 10/22/20.		

ALL PAST DUE INVOICES ARE SUBJECT TO
1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 0.00	$ 552.50	$ 0.00	$ 697.50	$ 0.00

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 1,250.00**

Invoice

Sold by:
Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
Fine Screens
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	11-11-2020	401049747

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Oscar Mendoza	10-22-2020	217011578	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 10/22/2020 Thru 11/18/2020				
1	CA50-071	Godwin 50HP VFD CP W/CAGE 70AMP 460V R8	1	M		
1	D-2161	Goulds 3656 1-1/2" 40HP 3P 460V	1	M		
1	PT-255	PrimeGuard Pressure Transducer PXT-300	1	M		
1	DZONE02ROLLBACK	Delivery Zone 2 - Rollback				
1	ENVFEE	Environmental Fee				

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By

ALL PAST DUE INVOICES ARE SUBJECT TO
1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 2,592.00	$ 0.00	$ 265.00	$ 11.97	$ 222.35

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 3,091.32**

xylem
Let's Solve Water

godwin FLYGT

Invoice

Sold by:
Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno CA 93744-4377

SHIP TO
W M Lyles Company
Fine Screens
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	11-17-2020	401051122

Customer PO	Ordered By	Contract Date	Completed Date	W/O Number	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Oscar Mendoza	11-13-2020	11-13-2020	717016764	James O. Rufing	James O. Rufing	Net 30

ITEM	DESCRIPTION	QUANTITY	UNIT AMOUNT	EXTENDED AMOUNT
	Repair On: D-2161 **Made a service call on 11/13/2020 to service rental fleet D-2161. Verifued the complaint of thepump making noise found the pump cavitating due to a lack of waterthe customer increased the water and rersolved the cavitation retested and checkedgood. * Reference Manual Work Order LO11131630***			
MILEAGE	Mileage	80	2.50	200.00
LABOR	Labor Standard Rate	3.50	130.00	455.00
SERVICETRUCK	Godwin Service Truck	1	125.00	125.00
ENVIRONMENTALFE	Environmental Fee	1	12.50	12.50

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By

ALL PAST DUE INVOICES ARE SUBJECT TO 1 1/2% PER MONTH SERVICE CHARGE

Merchandise	Labor	Shipping	Misc. Charges	Taxes
$ 0.00	$ 455.00	$ 0.00	$ 337.50	$ 0.97

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 793.47**

Invoice

xylem
Let's Solve Water
godwin FLYGT

Sold by:
Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

RECEIVED
NOV 19 2020
By

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
1173 Beaumont
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	11-11-2020	401049746

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Robert Beck	10-22-2020	217011577	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 10/22/2020 Thru 11/18/2020				
2	HSDS080050QDDR	8" x 50' HD Layflat Hose W/QD	1	M	634.95	1,269.90

ALL PAST DUE INVOICES ARE SUBJECT TO
1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 1,269.90	$ 0.00	$ 0.00	$ 0.00	$ 98.42

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 1,368.32**

xylem
Let's Solve Water

godwin FLYGT

Invoice

Sold by:
Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
1173 Beaumont
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	12-01-2020	401053754

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Robert Beck	10-22-2020	217011577	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 11/19/2020 Thru 11/25/2020 *Return*				
2	HSDS080050QDDR	8" x 50' HD Layflat Hose W/QD	1	W	211.65	423.30
1	PZONE02PICKUP	Pickup Zone 2 - Pickup Truck			140.00	140.00

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DEC 07 2020
By

RECEIVED
DEC 07 2020
By

ALL PAST DUE INVOICES ARE SUBJECT TO
1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 423.30	$ 0.00	$ 140.00	$ 0.00	$ 43.66

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 606.96**

xylem
Let's Solve Water

godwin FLYGT

Sold by:

Invoice

Branch 017
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
Fine Screens
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	12-09-2020	401055728

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Oscar Mendoza	10-22-2020	217011578	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 11/19/2020 Thru 12/16/2020				
1	CA50-071	Godwin 50HP VFD CP W/CAGE 70AMP 460V R8	1	M		
1	D-2161	Goulds 3656 1-1/2" 40HP 3P 460V	1	M		
1	PT-255	PrimeGuard Pressure Transducer PXT-300	1	M		
1	ENVFEE	Environmental Fee				

RECEIVED
DEC 14 2020
By

ALL PAST DUE INVOICES ARE SUBJECT TO 1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 2,592.00	$ 0.00	$ 0.00	$ 11.97	$ 201.81

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 2,805.78**

Invoice

Sold by: **Branch 017**
11161 Harrel Street
Mira Loma, CA 91752-1439
Tel: 951-681-3636
Fax: 951-332-3679

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
W M Lyles Company
PO Box 4377
Fresno, CA 93744-4377

SHIP TO
W M Lyles Company
Fine Screens
715 W 4th Street
Beaumont, CA 92223

Cust. No.	Invoice Date	Invoice No.
00015587	01-06-2021	401061301

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
1173	Mr. Oscar Mendoza	10-22-2020	217011578	James O. Rufing	James O. Rufing	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 12/17/2020 Thru 01/04/2021 *Return*				
1	CA50-071	Godwin 50HP VFD CP W/CAGE 70AMP 460V R8	1	M		
1	D-2161	Goulds 3656 1-1/2" 40HP 3P 460V	1	M		
1	PT-255	PrimeGuard Pressure Transducer PXT-300	1	M		
1	PZONE02ROLLBACK	Pickup Zone 2 - Rollback				
1	ENVFEE	Environmental Fee				

ALL PAST DUE INVOICES ARE SUBJECT TO 1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 2,592.00	$ 0.00	$ 265.00	$ 11.97	$ 222.35

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 3,091.32**

Daily Time Sheet

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 10-1-20 S M T W (T) F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 98'

Weather Impact: none

Phase	990100330		949100080		949100080											
Description	Shut Down Fine Screens		Dust Control		Aeration Basin Dirt Clean up											

Excav/Trench Inspection Form Completed: ✓ Yes __N/A · Confined Space Entry Forms Completed: __Yes ✓ N/A · Scaffold Inspection Tag Completed: __Yes ✓ N/A · Travel / Subsistence · Respirator used for Silica · Rest Period · Lunch Break · Rest Period · Initial for No Accident / Injuries · PM/PE Approval: AC

Name	Emp No	Class	Rate	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	Total DT	Amount	✓	Start Time	Stop Time	✓ AM	✓	✓ PM	Initial	Employee Signature
Ernesto Velasquez	1926	FM		4		2		2												8					6:30	3:00	/	/	/	EV	[signature]
Jaime Pantoja	3551	Laborer		AT				School																							
Jose Mendoza Rodriguez	2611	Laborer		4				4												8					6:30	3:00	/	/	/	JM	[signature]
Richard Grosser	3523	Oper						8												8					6:30	3:00	/	/	/	RG	[signature]
			Hour Totals	8		2		14												24											

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Ernesto	17.230	4	2	2						8
WML Job Truck - Ernesto	15.182	2								2
WML Backhoe CAT	30.033									
WML Excavator John Deere 350G LC	20.041			6						6
WML Compresor	40.094									
WML Loader John Deere 644J	35.064									
WML Water Truck	14.030		2							2
WML Forklift Xtreme	32.037									
WML Crane Link Belt 80 Ton	31.028									
	Equip Totals	6	4	8						18

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: [signature]

FOREMAN'S DAILY REPORT

** This Form to be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
"Progress Through Performance"

Foreman: Ernesto
Job No: 55-1173
Date: 10-7-20

1. Weather

Today's Weather: 98' °F Weather Impact of Work

2. Work Force

Laborers: 2 Carpenters: 0 Masons: 0 Operators: 1 Employees Fit for Duty: Yes: ✓ No:

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)

Fine Screen Shutt Down To Pick up Dropped Loate Pumped out water & Shutt Loates washed Down Walls & Loate channels. Picked up Loates & Anchored Tee Post TO wall to prevent it from falling Down.
Dust Controlled Jobsite with water Truck.
Worked with Backhoe Removing Dirt from inbetween Rebar used 1' foot Bucket and Compressor to Blows out Dirt & Trash out of Rebar Bottoms.

4. Extra Work or Potentially Disputed Work Performed: none

5. Items of Concern or Comments: none.

6. SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES none.

Name: Safety Concern:
Corrective Action Taken:
Name: Safety Concern:
Corrective Action Taken:

7. NEAR MISS or CLOSE CALL INCIDENTS none.

Name: Description:
Further Discussions or Corrective Actions:
Name: Description:
Further Discussions or Corrective Actions:

8. EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES none.

Name:	Reason:	Verbal	☐	Handout	☐
Name:	Reason:	Verbal	☐	Handout	☐

9. END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed:	Yes	☑	No	☐
Reported ALL Injuries: (If Yes, Fill out Accident Report and Notify Project Safety Team)	Yes	☐	No	☑
Reported ALL Near Misses or Close Calls: (If Yes, Fill out Incident Report)	Yes	☐	No	☑

Foreman Signature: EJ

10. OFFICE USE ONLY

Approving Manager Signature

☐ Daily Job Safety Analysis	☐ Near Miss/Close Call Incidents
☐ Daily Work Recap	☐ Employee Recognition
☐ Safety Observations/Suggestions	☐ End of Shift Safety Checklist

Daily Time Sheet

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 11-10-20 S M (T) W T F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 72

Weather Impact: NO

Name	Emp No	Class	Rate	990100380 MBR CASSETTES ST	OT	990100330 Fine screen ST	OT	969500480 Install Labels on Equipment ST	OT	140500200 PUNCH LIST ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	DT	Amount	Respirator used for Silica	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Martin Barrera	2129	Lab. FM		4		3				1										8					6:00	2:30	✓	✓	✓	MB	Martin B
Federico Martin del Campo	2166	Lab		4		3				1										8					6:00	2:30	✓	✓	✓	fm	[signature]
Joe Constante	4053	Lab						4		4										8					6:00	2:30	✓	✓	✓	JC	[signature]
Hour Totals				8		6		4		6										24											

Exam/Trench Inspection Form Completed: Yes / N/A
Confined Space Entry Forms Completed: Yes / N/A
Scaffold Inspection Tag Completed: Yes / N/A
Travel / Subsistence
PM/PE Approval: AC

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Martin	17.215	4	3		1					8
WML Job Truck - Martin	15.184	1			1					2
WML Excavator JD-350G	20.041									
WML Water Truck	14.030									
WML Forklift Xtreme	32.037									
WML Loader John Deere 644J	35.064									
WML Compresor	40.094									
WML Scissor Lift	77.011									
WML Scissor Lift	77.012									
WML Scissor Lift	77.024									
WML Back-Hoe CAT	30.033									
Equip Totals		5	3		2					10

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: Martin Barrera

Daily Time Sheet

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 11-20-20   S M T W T (F) S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 72°

Weather Impact: NO

Excav/Trench Inspection Form Completed: ___Yes ✓ N/A

Confined Space Entry Forms Completed: ___Yes ✓ N/A

Scaffold Inspection Tag Completed: ___Yes ✓ N/A

PM/PE Approval: AC

Name	Emp No	Class	Rate	9901-0380 MBR-CASSETTES ST	OT	9901-0330 T&M WATER PUMP FINE SCREEN ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	Total DT	Travel / Subsistence Amount	Respirator used for Silica ✓	Start Time	Stop Time	Rest Period AM ✓	Lunch Break ✓	Rest Period PM ✓	Initial for No Accident / Injuries	Employee Signature
Martin Barrera	2129	Lab. FM		6		2														8					6:00	2:30	✓	✓	✓	MB	[signature]
Federico Martin del Campo	2166	Lab		8																8					6:00	2:30	X	X	X	[illegible]	[signature]
Joe Constante	4053	Lab		8																8					6:00	2:30	✓	✓	✓	JC	[signature]
Hour Totals				22		2														24											

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Martin	17.215	6	2							8
WML Job Truck - Martin	15.184	2								2
WML Excavator JD-350G	20.041									
WML Water Truck	14.030									
WML Forklift Xtreme	32.037									
WML Loader John Deere 644J	35.064									
WML Compresor	40.094									
WML Scissor Lift	77.011									
WML Scissor Lift	77.012									
WML Scissor Lift	77.024									
WML Back-Hoe CAT	30.033									
WML Scissor Lift	77.025									
Equip Totals		8	2							10

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: [signature]

FOREMAN'S DAILY REPORT

** This Form to Be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
Since 1945
Progress Through Performance

Foreman: Marlon Ban
Job No: 55-117 3
Date: 11-20-20

1. Weather:
Todays Weather: 72 °F Weather Impact on Work: NO

2. Work Force:
Laborers 3 Carpenters ____ Masons ____ Operators ____ Employees Fit for Duty: Yes X No ____

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)

MbR = Add New filter to cassettes

Fine Screen = Add Supports to pump.

4. Extra Work or Potentially Disputed Work Performed:

N/A

5. Items of Concern or Comments:

SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES

Name: Safety Concern:
Corrective Action Taken:

Name: Safety Concern:
Corrective Action Taken:

NEAR MISS or CLOSE CALL INCIDENTS

Name: Description:
Further Discussions or Corrective Actions:

Name: Description:
Further Discussions or Corrective Actions:

EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES

Name: ☐ Verbal ☐ Handout
Reason:

Name: ☐ Verbal ☐ Handout
Reason:

END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed: Yes X No ____

Reported ALL Injuries: Yes ____ No X (If Yes, Fill out Accident Report and Notify Project Safety Team)

Reported ALL Near Misses or Close Calls: Yes ____ No X (If Yes, Fill out Incident Report)

Marlon Ban
Foreman Signature:

OFFICE USE ONLY

Approving Manager Signature:

☐ Daily Job Safety Analysis
☐ Daily Work Recap
☐ Safety Observations/Suggestions
☐ Near Miss/Close Call Incidents
☐ Employee Recognition
☐ End of Shift Safety Checklist

Daily Time Sheet

W. M. LYLES CO. CONTRACTOR — Progress Through Performance

Date: 01/06/21 S M T W T F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: CLEAR

Weather Impact: NONE

Cost codes / activities:
- 949100080 — INSTALL WATER HOSE & PLATO
- 990100330 — REMOVE PUMP GODWIN PUMPS
- 708000020 — INSTALL GRATING

Excav/Trench Inspection Form Completed: __ Yes ✓ N/A
Confined Space Entry Forms Completed: __ Yes ✓ N/A
Scaffold Inspection Tag Completed: __ Yes ✓ N/A

Name	Emp No	Class	Rate	949100080 ST	OT	990100330 ST	OT	708000020 ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	Total DT	Travel / Subsistence Amount	Respirator used for Silica ✓	Start Time	Stop Time	Rest Period AM ✓	Lunch Break ✓	Rest Period PM ✓	Initial for No Accident / Injuries	Employee Signature
Tommie McMillien	2070	FM		6		1		1												8					6:30	3:00	✓	✓	✓	[initials]	[signature]
Tyler Hunley	2148	Carp		6		1		1												8					6:30	3:00	✓	✓	✓	TH	[signature]
* Daniel Harte	2097	Carp																							Ø	Ø					
Gilbert Majana	4247	Ap Carp		6		1		1												8					6:30	3:00	✓	✓	✓	GM	[signature]
Hour Totals				18		3		3												24											

PM/PE Approval: [initials]

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck	18.311	6	1	1						8
WML Job Truck	15.198	2								2
WML Forklift Xtreme	32.037									
WML Crane Link Belt 80 Ton	31.028									
WML Compresor	40.094									
WML Scissor Lift	77.011									
WML Scissor Lift	77.012									
WML Scissor Lift	77.024									
WML Scissor Lift	77.025									
WML Forklift JLG	32.029									
Equip Totals										10

Notes (Materials Received, Tests Performed, Etc): * DANNY HARTE, (NO WORK)

Foreman Signature: [signature]

FOREMAN'S DAILY REPORT

** This Form to Be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
Since 1954
Progress Through Performance

Foreman: TOM MCMILLION
Job No: 351173
Date:

1. Weather:
Todays Weather: 66 °F Weather Impact on Work: NONE

2. Work Force:
Laborers ____ Carpenters 2 Masons ____ Operators ____ Employees Fit for Duty: Yes ✓ No ____

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)
RUN WATER LINE & INSTALL 4 PLATES FOR WATER TEST, BRAKE DOWN, WATER PUMP & LOAD ON TRUCK FOR GOODWIN PUMP SYSTEMS, INSTALL GRATING

4. Extra Work or Potentially Disputed Work Performed: N/A

5. Items of Concern or Comments: N/A

SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES N/A

Name: Safety Concern:
Corrective Action Taken:

Name: Safety Concern:
Corrective Action Taken:

NEAR MISS or CLOSE CALL INCIDENTS N/A

Name: Description:
Further Discussions or Corrective Actions:

Name: Description:
Further Discussions or Corrective Actions:

EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES

Name: Tyler Hunley ☑ Verbal ☐ Handout
Reason: TRUSTWORTHY

Name: ☐ Verbal ☐ Handout
Reason:

END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed: Yes ✓ No ____

Reported ALL Injuries: Yes ____ No ✓ (If Yes, Fill out Accident Report and Notify Project Safety Team)

Reported ALL Near Misses or Close Calls: Yes ____ No ✓ (If Yes, Fill out Incident Report)

Foreman Signature:

OFFICE USE ONLY

Approving Manager Signature:

☐ Daily Job Safety Analysis
☐ Daily Work Recap
☐ Safety Observations/Suggestions
☐ Near Miss/Close Call Incidents
☐ Employee Recognition
☐ End of Shift Safety Checklist

Daily Time She[et]

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 2-17-21 S M T (W) T F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 71°

Weather Impact: NO

Cost codes / descriptions:

Code	Description
200850010	16"NPW EXC.
200850030	16"NPW INSTALL PIPE.
990100330	MBR - 1½" NPW
990100330	Fine Screen 3"NPW.

Excav/Trench Inspection Form Completed: X Yes __N/A
Confined Space Entry Forms Completed: X Yes __N/A
Scaffold Inspection Tag Completed: X Yes __N/A

Name	Emp No	Class	Rate	200850010 ST	OT	200850030 ST	OT	990100330 ST	OT	990100330 ST	OT	Total ST	OT	DT	Travel / Subsistence Amount	Respirator used for Silica ✓	Start Time	Stop Time	Rest Period AM ✓	Lunch Break ✓	Rest Period PM ✓	Initial for No Accident / Injuries	Employee Signature
Martin Barrera	2129	Lab. FM		2		2		2		2		8					6:00	2:30	X	X	X	MB	Martin Barrera
Federico Martin del Campo	2166	Lab		2		6						8					6:00	2:30	/	/	/	[initials]	[signature]
Marcus Rios	3555	Carp		2		6						8					6:00	2:30	/	/	/	MR	[signature]
Juan Rudor	4457	OP		2		6						8					6:00	2:30	/	/	/	[initials]	[signature]
			Hour Totals	8		20		2		2		32											

PM/PE Approval: AC

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Martin	17.215	2	2	2	2	8
WML Job Truck - Martin	15.184	1	1			2
WML Excavator JD-350G	20.041					
WML Water Truck	14.030					
WML Forklift Xtreme	32.037					
WML Loader John Deere 644J	35.064					
WML Compresor	40.094					
WML Scissor Lift	77.011					
WML Scissor Lift	77.012					
WML Scissor Lift	77.024					
WML Back-Hoe CAT	30.033					
WML Scissor Lift	77.025					
WML cat excavator	20-040	4	2			6
Equip Totals		5	9	2	2	18

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: Martin Barrera

FOREMAN'S DAILY REPORT

** This Form to Be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
Since 1919
Progress Through Performance

Foreman: Martinbarnes
Job No: 55-1173
Date: 2-17-21

1. Weather:
Todays Weather: 70 °F Weather Impact on Work: No

2. Work Force:
Laborers 2 Carpenters 1 Masons ____ Operators 1 Employees Fit for Duty: Yes X No ____

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)

16" NPW - EXCAVATE
INSTALL PIPE

4. Extra Work or Potentially Disputed Work Performed:

N/A

5. Items of Concern or Comments:

SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES

Name: Safety Concern:
Corrective Action Taken:

Name: Safety Concern: N/A
Corrective Action Taken:

NEAR MISS or CLOSE CALL INCIDENTS

Name: Description:
Further Discussions or Corrective Actions:

Name: Description:
Further Discussions or Corrective Actions:

EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES

Name: ☐ Verbal ☐ Handout
Reason:

Name: ☐ Verbal ☐ Handout
Reason:

END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed: Yes X No ____

Reported ALL Injuries: Yes ____ No X (If Yes, Fill out Accident Report and Notify Project Safety Team)

Reported ALL Near Misses or Close Calls: Yes ____ No X (If Yes, Fill out Incident Report)

Martinbarnes
Foreman Signature:

OFFICE USE ONLY

Approving Manager Signature:

☐ Daily Job Safety Analysis
☐ Daily Work Recap
☐ Safety Observations/Suggestions
☐ Near Miss/Close Call Incidents
☐ Employee Recognition
☐ End of Shift Safety Checklist

Daily Time She[et]

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 2-18-21 S M T W (T) F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 70°

Weather Impact: NO

Activity codes: 990100330 – SET-UP for SHUT-Down; 140450080 – DUST Control; 140550030 – Equipment Ment.

Excav/Trench Inspection Form Completed: Yes X N/A; Confined Space Entry Forms Completed: Yes X N/A; Scaffold Inspection Tag Completed: Yes X N/A

PM/PE Approval: AC

Name	Emp No	Class	Rate	990100330 ST	OT	140450080 ST	OT	140550030 ST	OT	Total ST	OT	DT	Amount	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Martin Barrera	2129	Lab. FM		8						8				6:00	2:30	X	X	✓	MB	[signature]
Federico Martin del Campo	2166	Lab		8						8				6:00	2:30	✓	✓	✓		[signature]
Marcus Rios	3555	Carp		8						8				6:00	2:30	/	/	/	MR	[signature]
Ian Rader	4457	OP		4		2		2		8				6:00	2:30	/	/	/	IR	[signature]
			Hour Totals	28		2		2		32										

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Martin	17.215	8								8
WML Job Truck - Martin	15.184	2								2
WML Excavator JD-350G	20.041									
WML Water Truck	14.030	2								2
WML Forklift Xtreme	32.037									
WML Loader John Deere 644J	35.064									
WML Compresor	40.094									
WML Scissor Lift	77.011									
WML Scissor Lift	77.012									
WML Scissor Lift	77.024									
WML Back-Hoe CAT	30.033									
WML Scissor Lift	77.025									
WML CAT Excavator		2								2
Equip Totals		14								14

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: [signature]

FOREMAN'S DAILY REPORT

** This Form to Be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
"Progress Through Performance"

Foreman: Martin Lame
Job No: 55-4173
Date: 2-18

1. Weather:
Todays Weather: 70 °F   Weather Impact on Work: No

2. Work Force:
Laborers 2   Carpenters 1   Masons ___   Operators 1   Employees Fit for Duty: Yes X No ___

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)

· Set up For Shut Down

4. Extra Work or Potentially Disputed Work Performed:

N/A

5. Items of Concern or Comments:

SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES

Name: Safety Concern:
Corrective Action Taken:
Name: Safety Concern: N/A
Corrective Action Taken:

NEAR MISS or CLOSE CALL INCIDENTS

Name: Description:
Further Discussions or Corrective Actions:
Name: Description:
Further Discussions or Corrective Actions:

EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES

Name: ☐ Verbal   ☐ Handout
Reason:
Name: ☐ Verbal   ☐ Handout
Reason:

END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed: Yes X No ___
Reported ALL Injuries: Yes ___ No X (If Yes, Fill out Accident Report and Notify Project Safety Team)
Reported ALL Near Misses or Close Calls: Yes ___ No X (If Yes, Fill out Incident Report)

[signature]
Foreman Signature:

OFFICE USE ONLY

[signature]
Approving Manager Signature:

- ☐ Daily Job Safety Analysis
- ☐ Daily Work Recap
- ☐ Safety Observations/Suggestions
- ☐ Near Miss/Close Call Incidents
- ☐ Employee Recognition
- ☐ End of Shift Safety Checklist

Daily Time Sheet

WM IVIE CO

Progress Through Performance

Date: 6-2-21 S M T W T F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 89°

Weather Impact: none

Name	Emp No	Class	Rate	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	Total DT	Amount	Travel / Subsistence	Respirator used for Silica	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Ernesto Velasquez	1926	FM		1		6		1												8						7:00	3:30	/	/	/	EV	EVJ
Jaime Pantoja	3551	Laborer		1		6		1												8						7:00	3:30	/	/	/	JP	
Jose Mendoza-Rodriguez	2611	Laborer		1		6		1												8						7:00	3:30	/	/	/	JM	
Richard Grosser	3523	Oper		1		5				2										8						7:00	3:30	/	/	/	RG	
			Hour Totals	4		23		3		2										32												

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total	Notes (Materials Received, Tests Performed, Etc):
WML Foreman Truck - Ernesto	17.230	1	6	1						8	
WML Job Truck - Ernesto	15.182		2							2	
WML Backhoe CAT	30.033										
WML Excavator John Deere 350G LC	20.041										
WML Compresor	40.094										
WML Loader John Deere 644J	35.064										
WML Water Truck	14.030										
WML Forklift Xtreme	32.037				2					2	
WML Crane Link Belt 80 Ton	31.028										
WML Forklift JLG	32.029										
WML CAT Exc	20.040										
WML Backhoe JD	30.048		5							5	
WML Takeuchi Mini Exc	20.037	1								1	
		Equip Totals	2	13	1	2				18	

Foremen Signature: EVJ

	9	9	0	1	0	0	4	5	0
	Backfill P/U T/M *								
	4	2	2	2	6	2	0	2	0
	Install 20" E/O Pipe								
	9	9	0	1	0	3	0	3	0
	Fuse 2" NPW Fine screens								
	1	4	0	5	5	0	0	2	0
	Dust Control								

Excav/Trench Inspection Form Completed: Yes N/A

Confined Space Entry Forms Completed: Yes N/A

Scaffold Inspection Tag Completed: Yes N/A

Rest Period / Lunch Break / Rest Period

Initial for No Accident / Injuries

PM/PE Approval

SL

FOREMAN'S DAILY REPORT

** This Form to Be Filled out at the End of Work Shift **

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Foreman: Ernesto Vasquez
Job No: 09123
Date:

1. Weather:
Todays Weather: ____ °F Weather Impact on Work: none

2. Work Force:
Laborers 3 Carpenters 0 Masons 0 Operators 1 Employees Fit for Duty: Yes ✓ No ___

3. Work performed today: (Description of Work Activities, Equipment Used, Test Performed, Materials Received, Etc.)
Backfilled P/W Trench Sanded & Placed Marking Tape on Top of Sand. all on T/M.
Installed 3-pipe supports, and Vertical Pipe 12 anchor bolts were placed Installed Blind flange on 20" Tee on Top. IPS

4. Extra Work or Potentially Disputed Work Performed:
* T/M Backfilled P/W Trench North of MBR Bldg.

5. Items of Concern or Comments:
none.

SAFETY OBSERVATIONS/SUGGESTIONS FROM EMPLOYEES

Name: Safety Concern: none.
Corrective Action Taken:

Name: Safety Concern:
Corrective Action Taken:

NEAR MISS or CLOSE CALL INCIDENTS

Name: Description: none.
Further Discussions or Corrective Actions:

Name: Description:
Further Discussions or Corrective Actions:

EMPLOYEES RECOGNIZED FOR SAFE WORK PRACTICES/ATTITUDES

Name: none. ☐ Verbal ☐ Handout
Reason:

Name: ☐ Verbal ☐ Handout
Reason:

END OF SHIFT SAFETY

"Take 2" End of Day Debriefing/Tomorrow Pre-Plan Completed: Yes ✓ No ___

Reported ALL Injuries: Yes ___ No ✓ (If Yes, Fill out Accident Report and Notify Project Safety Team)

Reported ALL Near Misses or Close Calls: Yes ___ No ✓ (If Yes, Fill out Incident Report)

Foreman Signature:

OFFICE USE ONLY

Approving Manager Signature:

☐ Daily Job Safety Analysis
☐ Daily Work Recap
☐ Safety Observations/Suggestions
☐ Near Miss/Close Call Incidents
☐ Employee Recognition
☐ End of Shift Safety Checklist

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-55	
Design Adjustment: WML COP-062	MBR RAS Pumps – Potable Water Backup Seal Water System

Reason for Design Changes:

The MBR RAS Pumps require seal water to lubricate the seals on the vertical turbine pumps. Alone with delivering pretreated aerated RAS to the MBR system these pumps are critical to producing non-potable water for all plant operations. In situations of prolonged downtime of the MBR system or low pressure on the non-potable water supply a backup supply of water is needed to restart the MBR process.

Design and Scope Changes:

- The contractor shall procure and install additional underground and above ground piping, fittings and a backflow device to prevent cross contamination of the potable water supply system as directed by MWH. The backflow device shall be installed inside the MBR Building with suitable fittings and isolation valving for connection to the existing seal water system.

Cost Impact:

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of **$11,721.54** to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 062
(By Contractor)

To (Engineer/CM):	**From (Contractor)**:
MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com	W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com

PCO/DCM No.: 062

Subject: 2" Potable Water Install at MBR

Reference Documents: Attached

DESCRIPTION

This COP is to add the 2" potable water line and backflow preventer on the north side of the MBR building. One hose bib will be added to the north side of the road outside of the building and this will tee off to enter the building and connect to the NPW inside with a backflow preventer.

COST ESTIMATE

Total Cost: $ 11,721.54. – see attached breakdown.

SCHEDULE IMPACT

N/A

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Oscar Mendoza, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

7/13/2021

Reference #:

Attention: Charles W. Reynolds

City of Beaumont WWTP Salt Mitigation Upgrade Project

DESCRIPTION: 2" Potable Water Install

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	2" Potable Water Install	1	LS	61.5	$ 5,070.36	$ 1,229.90	$ 3,791.46	$ -	$ 10,091.72
2		1	LS	0	$ -	$ -	$ -	$ -	$ -
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				61.5	$ 5,070.36	$ 1,229.90	$ 3,791.46	$ -	$ 10,091.72

Subtotal		$	10,091.72
Mark-up - Labor	15%	$	760.55
Mark-up - Equipment	15%	$	184.49
Mark-up - Materials	15%	$	568.72
Mark-up - Subcontractor	5%	$	-
Bond	1.0%	$	116.05
Total This Change Order		**$**	**11,721.54**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

2" Potable Water Install 1/27/2021

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
T&M Ticket 6/2/2021	1			2			1														
T&M Ticket 6/2/2021	3			3																	
T&M Ticket 6/1/2021	8	0.5		16	0.5		8	0.5													
T&M Ticket 6/7/2021	4			10																	
T&M Ticket 6/9/2021	2			2																	
	18	0.5	0	33	0.5	0	9	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0

Name	Rate ST	Rate PT	Rate DT	Hours ST	Hours PT	Hours DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	18	0.5	0	$1,499.79
Lab Pipe	$77.73	$103.27	$128.79	33	0.5	0	$2,616.65
Operator	$98.67	$131.84	$165.00	9	0.5	0	$953.92
Carp FM	$87.32	$117.91	$148.48	0	0	0	$0.00
Carp	$83.44	$112.07	$140.71	0	0	0	$0.00
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00
				60	1.5	0	
				Total Labor =			**$5,070.36**

B. Equipment

Description	17.230.	15.182	17.215	15.184	30.048		
T&M Ticket 6/2/2021	1				1		
T&M Ticket 6/2/2021			3	1			
T&M Ticket 6/1/2021	8	2			8		
T&M Ticket 6/7/2021	4	2					
T&M Ticket 6/9/2021	2	1					
	15	3	3	1	9	0	0

Number	Description	Rate	Hours	Extension
17.230.	1/2 Ton PickupChevy1500 Crew Cab	$29.60	15	$444.00
15.182	Gang TruckChevy3500 Service Bed	$29.60	3	$88.80
17.215	1/2 Ton PickupChevy1500 LS Ext Cab 2WD	$29.60	3	$88.80
15.184	Gang TruckChevy3500 Service Bed	$29.60	1	$29.60
30.048	Loader Backhoe 410John Deere410L	$64.30	9	$578.70
			31	
		Total Equipment =		**$1,229.90**

C. Materials

	Quantity	Unit	Price	Extension
2" Backflow Preventer	1	ea	$ 909.51	$909.51
1" SST Pipe - 5'	1	ft	$ 99.20	$99.20
1" SST 90 Bend	1	ea	$ 17.42	$17.42
1" SST Ball Valve	1	ea	$ 52.75	$52.75
1" x 1/2" Bushing Reducer	1	ea	$ 10.28	$10.28
1" Thd NPT to Hose Adaptor	1	ea	$ 10.00	$10.00
2" SST Ball Valve	4	ea	$ 122.50	$490.00
2" x 1" Bushing Reducer	1	ea	$ 27.09	$27.09
2" HDPE to SST Transition	2	ea	$ 61.88	$123.76
Double Strut - 2'	1	ft	$ 51.28	$51.28
2" Rigid Pipe Clamp	4	ea	$ 7.59	$30.36
4" HDPE - 40'	1	ft	$ 165.60	$165.60
4" x 2" HDPE Tee	1	ea	$ 39.60	$39.60
2" HDPE - 40'	1	ft	$ 51.20	$51.20
2" HDPE 90 Bend	2	ea	$ 5.91	$11.82
4" x 2" HDPE Reducer	1	ea	$ 11.64	$11.64
4" HDPE 90 Bend	2	ea	$ 18.61	$37.22
2" SST 90 Bend	4	ea	$ 50.36	$201.44
1-1/2" SST Tee	1	ea	$ 66.10	$66.10
2" SST Thd Union	2	ea	$ 81.08	$162.16
Unistrut Channel - 5'	1	ft	$ 78.47	$78.47
Strut Channel Floor Mount	2	ea	$ 161.19	$322.38
2" x 1-1/2" Bushing Reducer	1	ea	$ 31.73	$31.73
2" SST Pipe - 10'	1	ft	$ 324.33	$324.33
1-1/2" SST Pipe - 3'	1	ft	$ 85.91	$85.91
1-1/2" SSt Ball Valve	1	ea	$ 122.50	$122.50
Tax	7.750%			$257.71
			Subtotal	$3,791.46
		Total Material =		**$3,791.46**

D. Subcontractor

	Quantity	Unit	Price	Extension
		Total Subcontract =		**$0.00**

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Project No. 56.1173
Phase Code 99.010.0450 Date 06/01/2021

DESCRIPTION OF WORK

Excavated for 2" PW, fused & installed HDPE pipe, installed SST pipes & valves.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	8	1		
Jaime Pantoja	Labor	8	1/2		
Jose Mendoza Rodriguez	Labor	8	1/2		
Richard Grosser	Operator	8	1/2		

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.250	1	8	
Job Truck	15.182	1	2	
JD Backhoe	30.048	1	8	

MATERIAL

DESCRIPTION	QTY	UM
INSTALLATION of TEMP PIPING from CENTRIFUGE PS TO CLARIFIER IS NOT T+M WORK. PLEASE REMOVE HOURS.		
7/19 SR - These hours have not been charged to this T+M call. Timesheet included for reference		

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 7/16/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E Date 07/15/21

Daily Time Sheet

W M LYLES CO.
Progress Through Performance

S M (T) W T F S

Date: 6-1-21

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: 92°

Weather Impact: none

Cost code 1: 990100450 — # T/M Excavate / Install 12" PW

Cost code 2: 729001080 — Hook up Temp Pipe on Pump Station

Excav/Trench Inspection Form Completed ✓Yes __N/A

Confined Space Entry Forms Completed __Yes ✓N/A

Scaffold Inspection Tag Completed __Yes ✓N/A

PM/PE Approval: [illegible]

Name	Emp No	Class	Rate	Code 1 ST	Code 1 OT	Code 2 ST	Code 2 OT	Total ST	Total OT	Total DT	Travel / Subsistance Amount	Respirator used for Silica	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Ernesto Velasquez	1926	FM		8	1		1												
Jaime Pantoja	3551	Laborer		8	½		1	8	2				11:00	9:00	✓			EV	[signature]
Jose Mendoza-Rodriguez	2611	Laborer		8	½		1	8	1½				12:00	9:00	✓			JP	[signature]
Richard Grosser	3523	Oper		8	½		1	8	1½				12:00	9:00	✓			JM	[signature]
								8	1½				12:00	9:00	✓			RG	[signature]
Hour Totals				32	2½		4	32	6½										

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck - Ernesto	17.230	8								
WML Job Truck - Ernesto	15.182	2								8
WML Backhoe CAT	30.033									2
WML Excavator John Deere 350G LC	20.041									
WML Compresor	40.094									
WML Loader John Deere 644J	35.064									
WML Water Truck	14.030									
WML Forklift Xtreme	32.037									
WML Crane Link Belt 80 Ton	31.028									
WML Forklift JLG	32.029									
WML CAT Exc	20.040									
WML Backhoe JD	30.048	8								
WML Takeuchi Mini Exc	20.037									8
Equip Totals		18								18

Notes (Materials Received, Tests Performed, Etc):

Foreman Signature: [illegible]

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade Project No. 55.1173
Phase Code 99.010.0450 Date 06/02/2021

DESCRIPTION OF WORK

Backfill potable water trench to City tie-in.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	1			
Jaime Pantoja	Lab	1			
Jose Mendoza Rodriguez	Lab	1			
Richard Grosser	Oper.	1			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	1	
Backhoe JD	30.048	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 6/7/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 06/04/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Odor Mitigation Upgrade Project No. 55.1173
Phase Code 99.010.0450 Date 06/02/2021

DESCRIPTION OF WORK

2" potable water bypass in MBR

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Martin Barrera	FM	3			
Frederico Martin del Campo	Lab	3			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.215	1	3	
Job Truck	15.184	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title PE Date 6/7/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 06/04/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Project No. 55.1176
Phase Code 99.010.0450 Date 06/07/21

DESCRIPTION OF WORK

Installed 2" PW @ MBR building. Core drilled through the wall w/ Hilti anchored.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Fresto Valasquez	FM	4			
Jaime Pantoja	Labor	2			
Jose Mendoza Rodriguez	Labor	8			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	4	
Job Truck	15.182	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 7/16/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE Date 07/15/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1919
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Project No. 55.1173
Phase Code 99.010.0450 Date 06/09/2021

DESCRIPTION OF WORK

Installed reducer & 2" SST fittings.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	2			
Jose Mendoza Rodriguez	Labor	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	2	
Job Truck	15.182	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 7/16/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 07/15/21

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-57	
Design Adjustment: WML COP-059 CLAR-41	8" WAS Additional Piping, Valves & Influent Mods to Sludge Holding Tanks

Reason for Design Changes:

The feed of WAS from the MBR building to the modified sludge holding tanks is to be modified to prevent the trapping air in the underground piping system and to feed the two sludge holding tanks independent of the centrifuge feed pumping station.

Design and Scope Changes:

- The contractor shall procure additional piping, tank isolation valves and fittings necessary to complete the design changes as outlined in the attached Clarification No.41, (See attachment).
- The contractor shall also make all necessary modifications to the sludge holding tanks by core drilling for holes for new 8" discharge piping and 4" launder drains.

Cost Impact:

MWH has reviewed the attached WML cost proposal and find it acceptable. Accordingly, MWHC recommends a contract cost increase of **$37,567.40** to be executed in a change order for the modifications requested.

CITY OF BEAUMONT WWTP SALT MITIGATION UPGRADE PROJECT

CHANGE ORDER PROPOSAL (COP) # 059
(By Contractor)

To (Engineer/CM):	**From (Contractor)**:
MWH Constructors Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com	W.M. Lyles Co. Attention: Oscar Mendoza Phone: 619-565-6064 Email: omendoza@wmlylesco.com

PCO/DCM No.: 059

Subject: 8" WAS Re-Route to Solids Holding Tanks

Reference Documents: Attached

DESCRIPTION

This COP is to modify the 8" WAS to Solids Holding Tank Re-Route. Influent for these tanks will bypass the existing clarifier tank influent and a riser will be installed at each tank.

COST ESTIMATE

Total Cost: $ 37,567.40. – see attached breakdown.

SCHEDULE IMPACT

N/A

Received by MWH Constructors (Date):

RESPONSE	
Response By:	**Date**:

Final Distribution: Oscar Mendoza, W.M. Lyles Co.
Brian Knoll, Webb Associates
MWH Inspector

W. M. Lyles Co.
42142 Roick Drive
Temecula, CA 92590

7/13/2021

Reference #: CLAR - 41

Attention: Charles W. Reynolds

City of Beaumont WWTP Salt Mitigation Upgrade Project

DESCRIPTION: 8" WAS C/O Re-Route

Item:			Unit	Total MH	Total MH Cost	Eq. Cost	Material	Subcont.	Total Cost
1	8" WAS C/O Re-Route	1	LS	162	$ 13,420.72	$ 4,044.02	$ 14,879.12	$ -	$ 32,343.87
2		1	LS	0	$ -	$ -	$ -	$ -	$ -
3		1	LS	0	$ -	$ -	$ -	$ -	$ -
		1	LS	0	$ -	$ -	$ -	$ -	$ -
Total Costs				162	$ 13,420.72	$ 4,044.02	$ 14,879.12	$ -	$ 32,343.87

Subtotal		$	32,343.87
Mark-up - Labor	15%	$	2,013.11
Mark-up - Equipment	15%	$	606.60
Mark-up - Materials	15%	$	2,231.87
Mark-up - Subcontractor	5%	$	-
Bond	1.0%	$	371.95
Total This Change Order		**$**	**37,567.40**

Comments:

City of Beaumont WWTP Salt Mitigation Upgrade Project

8" WAS C/O Re-Route ###

A. Labor

Description	Lab Pipe FM			Lab Pipe			Operator			Carp FM			Carp			Lab			Cement Mason		
	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT	ST	PT	DT
T&M Ticket 3/30/21	8			16			8														
T&M Ticket 4/8/21	4			8			4														
T&M Ticket 4/23/21	4			8			4														
T&M Ticket 4/27/21	4			8			4														
T&M Ticket 5/3/21										3			6								
T&M Ticket 5/5/21										2			4								
T&M Ticket 5/6/21										2			4								
T&M Ticket 5/26/21	7			16																	
T&M Ticket 6/21/21										8			8								
T&M Ticket 6/23/21										4			4								
T&M Ticket 5/27/21	1			8			4														
T&M Ticket 6/17/21																					
	28	0	0	64	0	0	24	0	0	19	0	0	26	0	0	0	0	0	0	0	0

Name	Rate ST	PT	DT	Hours ST	PT	DT	Extension
Lab Pipe FM	$80.34	$107.19	$134.03	28	0	0	$2,249.63
Lab Pipe	$77.73	$103.27	$128.79	64	0	0	$4,974.59
Operator	$98.67	$131.84	$165.00	24	0	0	$2,368.00
Carp FM	$87.32	$117.91	$148.48	19	0	0	$1,659.08
Carp	$83.44	$112.07	$140.71	26	0	0	$2,169.43
Lab	$74.26	$98.07	$121.86	0	0	0	$0.00
Cement Mason	$80.42	$105.60	$130.78	0	0	0	$0.00
MR FM	$88.19	$119.10	$150.01	1	0	0	$88.19
				162	0	0	
				Total Labor =			**$13,420.72**

Provide credit for labor. See comment below.

B. Equipment

Description	17.230.	15.182	20.041	20.037	18.305	30.048	18.311
T&M Ticket 3/30/21	8	2	2	3	1		
T&M Ticket 4/8/21	4	2	4	8	1		
T&M Ticket 4/23/21	4	1				5	
T&M Ticket 4/27/21	4	1			1	4	
T&M Ticket 5/3/21							3
T&M Ticket 5/5/21							2
T&M Ticket 5/6/21							2
T&M Ticket 5/26/21	7	2					
T&M Ticket 6/21/21							8
T&M Ticket 6/23/21							4
T&M Ticket 5/27/21	1	2				4	
T&M Ticket 6/17/21							
	27	8	6	11	3	13	19

Number	Description	Rate	Hours	Extension
17.230.	1/2 Ton PickupChevy1500 Crew Cab	$29.60	27	$799.20
15.182	Gang TruckChevy3500 Service Bed	$29.60	8	$236.80
20.041	ExcavatorJohn Deere350GLC	$151.12	6	$906.72
20.037	Mini ExcavatorTakeuchiTB260	$35.70	11	$392.70
18.305	1 Ton Gang TruckFordF350 Ext Cab	$29.60	3	$88.80
30.048	Loader Backhoe 410John Deere410L	$64.30	13	$835.90
18.311	1 Ton TruckFord Crew Cab 2WD	$29.60	19	$562.40
15.198	Gang TruckDodge5500	$38.38	5	$191.90
17.275	1/2 Ton PickupChevy1500 Crew Cab	$29.60	1	$29.60
			93	
		Total Equipment =		**$4,044.02**

C. Materials

	Quantity	Unit	Price	Extension
1" SST Ball Valve	2	ea	$ 149.04	$298.08
1" GSP Pipe - 21'	1	ft	$ 88.13	$88.13
1" GSP 90 Bend	4	ea	$ 8.35	$33.40
Adjustable Pipe Support	2	ea	$ 167.50	$335.00
8" DIP Glass Lined Spool Flg x PE	2	ea	$ 1,202.00	$2,404.00
8" DIP Glass Lined Tee Flg	2	ea	$ 378.00	$756.00
8" DIP Glass Lined Tee MJ	2	ea	$ 215.00	$430.00
8" DIP Glass Lined Blind Flg W/ Tap	2	ea	$ 255.00	$510.00
8" DIP ~~Butterfly~~ Valve Plug	2	ea	$ 2,354.00	$4,708.00
8" FCA Adapter	2	ea	$ 361.00	$722.00
8" MJ x MJ Restraint Adapter	7	ea	$ 74.00	$518.00
8" DIP Glass Lined Spool PE x PE	2	ea	$ 748.00	$1,496.00
McMaster	1	LS	$ 116.76	$116.76
8" DIP Glass Lined 45 Bend	2	ea	$ 118.00	$236.00
8" DIP Glass Lined 90 Bend	1	ea	$ 254.00	$254.00
8" C900 Spool - 20'	1	ft	$ 320.00	$320.00
8" DIP Flg Bolts and Nuts (Sets of 8)	12	ea	$ 30.00	$360.00
8" 150# Garlock Gasket	12	ea	$ 18.63	$223.56
Tax	7.750%			$1,070.19
			Subtotal	$14,879.12
			Total Material =	**$14,879.12**

Provide credit for contract 8" plug valve & fittings shown on contract drawings C-23 and C-41, Detail 11.

D. Subcontractor

	Quantity	Unit	Price	Extension
				$0.00
			Total Subcontract =	**$0.00**

McMASTER-CARR®

Delivers tomorrow 9-11 am

1	**Strut-Mount Metal Routing Clamp** 304 Stainless Steel, 8-5/8" ID, 1/8" Thick 3115T66 Your reference:	2 Each	$17.29 Each	$34.58
2	**High-Profile Strut Channel** Slotted Hole, Galvanized Steel, 3-1/4" High Channel, 1 Foot Long 3563T175 Your reference: **Length, ft.** 1 ft.	2 Each	10.88 Each	21.76
3	**316 Stainless Steel Stud Anchor for Concrete** 1/2" Diameter, 5-1/2" Long 97799A302 Your reference:	4 Each	12.83 Each	51.32

Merchandise	107.66
Shipping	9.10
Tax	8.34
Total	**$125.10**

Contact
Contact

Delivery method
Ground
Tomorrow 9-11 am

Delivery address
W. M. Lyles Co
715 west 4th St
Beaumont CA 92223

Delivery attention:
Armando Cayama

Payment method
Invoice

Invoice / receipt preference
PO BOX 28130
acayama@wmlylesco.com

Billing address
W. M. Lyles Co
PO BOX 28130
Fresno CA 93729

Tax
Taxable

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name WWTP Salt Mitigation Upgrade **Project No.** 55.1173

Phase Code 99.010.0410 **Date** 3/30/2021

DESCRIPTION OF WORK

Shoring, install, excavation & tunneling under Utilities for 8" WAS line

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	8			
Jaime Pantoja	Laborer	8			
Jose Mendoza Rodriguez	Laborer	8			
Richard Grosser	Oper	8			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	8	
Job Truck	15.182	1	2	
JD 350Lg Excavator	20.041	1	2	
Rental Mini Exc.	Outside Rental			

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name C. Reynolds
Title Janitor **Date** 4/1/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE **Date** 4/1/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1950
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Ugrade **Project No.** 55.1173

Phase Code 99.010.0410 **Date** ~~4/9/2021~~ 9/8/2021

DESCRIPTION OF WORK

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	4			
Jaime Penaloza	Laborer	4			
Jose Mendoza Rodriguez	Laborer	4			
Richard Crossen	Oper.	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM truck	17.230	1	4	
Job truck	15.182	1	2	
JD Excavator	20.041	1	4	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 4/9/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE Date 04/09/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade Project No. 55.1173
Phase Code 99.010.0410 Date 4/23/2021

DESCRIPTION OF WORK

Install 11.50° fitting & 14' of C905 to the existing chlorine. Installed 90° fitting, sanded, jetted & backfilled pipe fitting.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	4			
Jaime Partida	Laborer	4			
Jose Mendoza Rodriguez	Laborer	4			
Richard Grosser	Oper.	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	4	
Job Truck	15.182	1	1	
JD Backhoe	30.048	1	5	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title PE Date 4-26-21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 04/26/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1919
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade **Project No.** 55.1173
Phase Code 99.010.0410 **Date** 4/27/21

DESCRIPTION OF WORK

Bed/Sand, installed and backfilled 8" WAS to solids holding tanks. AG & UG

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	4			
Jaime Pantoja	Lab	4			
Jose Mendoza Rodriguez	Lab	4			
Richard Grosser	Oper.	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	4	
Job Truck	15.182	1	1	
Cont. Ex C.	30.048	1	4	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Chuck Reynolds
Print Name Charles Reynolds
Title RE Date 4/29/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 4/28/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Upgrade **Project No.** 55.1173
Phase Code 99.010.0410 **Date** ~~5/4/2021~~ 5/3/2021

DESCRIPTION OF WORK

Layout done for 8" WAS line to Solids holding tanks

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Tommie McMillian	FM	3			
Tyler Hunley	Carp	3			
Gilbert Majano	Ap Carp	3			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18.311	1	3	
Job Truck	15.198	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 5/5/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE Date 05/04/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name City of Beaumont WWTP Sludge Management Upgrade **Project No.** 55.1173
Phase Code 99.010.0410 **Date** 05/05/2021

DESCRIPTION OF WORK

Labor & remove debris for core of 8" WAS line to Solids Holding Tanks 1 & 2.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Jammie McMillen	FM	2			
Tyler Hunter	Comp	2			
Gilbert Magana	Ag Comp	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18311	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 5/7/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 05/07/2021

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name Cayuse Beaumont-WWTP Salt Mitigation Upgrade Project No. 55.1173
Phase Code 99.010.0410 Date 05/06/21

DESCRIPTION OF WORK

Core layout for 8" WAS to Solids Holding Tanks.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Tommie McMillien	FM	2			
Tyler Hunley	Carp	2			
Wilbert Majano	Ap. Carp	2			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18.311	1	2	
Job Truck	15.198	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name C. Reynolds
Title RE Date 5/10/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E Date 5/10/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1915
Progress Through Performance

Project Name City of Beaumont Salt Migration Upgrade Project No. 55.173
Phase Code 99.010.0410 Date 05/26/2021

DESCRIPTION OF WORK

Install 8" WAS pipes w/ riser valve & fittings @ solids holding tanks

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	7			
Jaime Pantoja	Lab	8			
Jose Mendoza Rodriguez	Lab	8			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.130	1	7	
Job Truck	15.182	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 5/28/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE Date 05/27/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Project No. 55.1173
Phase Code 990.010.0410 Date 05/20/2021

DESCRIPTION OF WORK

Install 8" WAS pipes on clarifier tanks (Solids Holding Tanks) w/ Valves & fittings.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ernesto Velasquez	FM	1			
Jaime Pantoja	Labor	4			
Jose Mendoza Rodriguez	Labor	4			
Richard Grosser	Operator	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.230	1	1	
Job Truck	15.182	1	2	
JD Backhoe	30.048	1	4	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 7/10/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 07/15/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name City of Beaumont WWTP Salt Mitigation Project No. 55.1173
Phase Code 99.810.0410 Date 06/17/2021

DESCRIPTION OF WORK

Installed WAS piping at Solids Holding Tanks.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Ray Martin	FM	1			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	17.275	1	1	

MATERIAL

DESCRIPTION	QTY	UM
Pipe install 1-hr. The rest was commissioning.		
7/19 SR - This has been corrected. See timesheet for reference.		

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 7/16/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 07/15/21

Daily Time Sheet

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 6-17-21　　S M T W (T) F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: GOOD

Weather Impact: NONE

Cost codes: 9491-0060-0 COMMISSIONING; 9901-0041-0 WAS PIPING

Name	Emp No	Class	Rate	9491-0060-0 ST	OT	9901-0041-0 ST	OT	Total ST	Total OT	Total DT	Travel / Subsistence Amount	Respirator used for Silica	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Ray Martin	2322	FM		4		(4)		0					6:00	2:30	✓	✓		[signature]	[signature]
Hour Totals				4		(4)		0											

Excav/Trench Inspection Form Completed: __Yes __N/A
Confined Space Entry Forms Completed: __Yes __N/A
Scaffold Inspection Tag Completed: __Yes __N/A

PM/PE Approval: [initials]

Equipment Description	Equip #	Hours	Hours	Total
WML Foreman Truck	17.275	4	(4)	0
WML Excavator CAT-350E	20.041			
WML Mini-Excavator Takeuchi TB-260	20.037			
WML Back-hoe John Deere 410L	30.051			
WML Water Truck	14.030			
WML Loader John Deere 644J	35.064			
WML Air Compresor	40.094			
WML Forklift JLG	32.032			
WML Forklift Xtreme	32.037			
WML Scissor Lift	77.012			
WML Scissor Lift	77.011			
Equip Totals		4	(4)	0

Notes (Materials Received, Tests Performed, Etc):
* Please process corrected TS for w/e 06/18/2021

Foreman Signature: [signature]

Daily Time Sheet

W. M. LYLES CO.
CONTRACTOR
Progress Through Performance

Date: 6-17-21

S M T W (T) F S

Job No.: 55.1173

Job Name: Salt Mitigation Upgrade Project

Location: Beaumont

Weather: GOOD

Weather Impact: NONE

Job columns: 9491-0060-0 (COMMISSIONING); 9901-0041-0 (WAS PIPING)

Excav/Trench Inspection Form Completed: ___Yes ___N/A
Confined Space Entry Forms Completed: ___Yes ___N/A
Scaffold Inspection Tag Completed ___Yes ___N/A

Name	Emp No	Class	Rate	9491-0060-0 ST	OT	9901-0041-0 ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	ST	OT	Total ST	Total OT	Total DT	Travel / Subsistence Amount	Respirator used for Silica	Start Time	Stop Time	Rest Period AM	Lunch Break	Rest Period PM	Initial for No Accident / Injuries	Employee Signature
Ray Martin	2322	FM		3		5														8					6:00	2:30	/	/		[signature]	[signature]
Hour Totals				3		5														8											

PM/PE Approval: [initials]

Equipment Description	Equip #	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Total
WML Foreman Truck	17.275	3	5							8
WML Excavator CAT-350E	20.041									
WML Mini-Excavator Takeuchi TB-260	20.037									
WML Back-hoe John Deere 410L	30.051									
WML Water Truck	14.030									
WML Loader John Deere 644J	35.064									
WML Air Compresor	40.094									
WML Forklift JLG	32.032									
WML Forklift Xtreme	32.037									
WML Scissor Lift	77.012									
WML Scissor Lift	77.011									
Equip Totals		3	5							8

Notes (Materials Received, Tests Performed, Etc):
* Original timesheet.
→ Corrected hours have moved 4 hours from T&M work to commissioning

Foreman Signature: [signature]

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1919
Progress Through Performance

Project Name City of Beaumont Low PSI Hydrogen Upgrade Project No. 56.1173
Phase Code 99.010.0410 Date 06/21/21

DESCRIPTION OF WORK

Drill for pipe supports, install missing bolts, cut all-thread anchors, layout for both 1" SS pipe @ Solids holding tanks

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Jommie McMillien	FM	8			
Tyler Hunley	JC	8			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18.311	1	8	
Job Truck	15.198	1	2	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 6/24/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title F.E. Date 06/23/21

W.M. Lyles Co.
PO Box 4377
Fresno, CA 93744

TIME & MATERIAL SHEET

W. M. LYLES CO.
CONTRACTOR
Since 1918
Progress Through Performance

Project Name City of Beaumont WWTP Sch. Mitigation Project No. 05.1173
Phase Code 99.010.0410 Date 06/23/2021

DESCRIPTION OF WORK

Installed 1" piping and cut + welded pipe supports for 8" WAS & Solids Holding Tanks.

LABOR

NAME	CLASS	ST	OT	DT	SHIFT
Jammie McMillen	FM	4			
Tyler Hunley	JC	4			

EQUIPMENT

DESCRIPTION	EQUIP. NO.	QTY	HRS	SHIFT
FM Truck	18.511	1	4	
Job Truck	15.198	1	1	

MATERIAL

DESCRIPTION	QTY	UM

I CERTIFY THAT I HAVE THE AUTHORITY TO AUTHORIZE THE WORK PERFORMED UNDER THIS FIELD WORK ORDER

CUSTOMER
Signature Charles Reynolds
Print Name Charles Reynolds
Title RE Date 6/24/21

W.M. Lyles Co.
Signature Samantha Robbins
Print Name Samantha Robbins
Title FE. Date 06/24/21

CITY OF BEAUMONT WASTE WATER TREATMENT PLANT
SALT MITIGATION UPGRADE PROJECT

CLARIFICATION 41

To (Construction Manager):	Stantec Attention: Charles Reynolds Phone: 702-497-8024 Email: Charles.w.reynolds@stantec.com
From (Engineer):	Aqua Engineering Attention: Boris Petkovic Phone: 801-683-3734 Email: boris.petkovic@aquaeng.com

Subject: WAS Line Modifications	**Location: Yard Piping/Solids Holding Tanks**

Reference Documents: Drawing No. C-23, SSM-4

CLARIFICATION

Note the following:

Current configuration of WAS piping under certain operating conditions may increase the possibility of trapping air in the WAS line. To address this issue changes to WAS piping noted in the attached drawings are proposed.

Prepared By (Name): Boris Petkovic, Aqua Engineering	**Date**: Feb. 18, 2021
Distributed By:	**Date**:

MATCHLINE - SEE DWG. NO. C-25

MATCHLINE - SEE DWG. NO. C-22

MATCHLINE - SEE DWG. NO. C-24

MATCHLINE - SEE DWG. NO. C-20

COORDINATE TABLE					
Point No.	N	E	Inv. Elev.	Fitting	Size
150	2280823.10	6336582.33	2538.70	–	VAR.
151	2280773.84	6336635.10	2540.00	–	VAR.
158	2280803.28	6336671.79	2539.50	END/FH	8"
159	2280813.09	6336595.58	2539.06	–	VAR.

G ℄ CURVE DATA
Δ = 90°00'00"
R = 20.00'
T = 20.00'
L = 31.42'
PI = N 2280866.03
E 6336530.63

D ℄ CURVE DATA
Δ = 22°31'43"
R = 90.00'
T = 17.93'
L = 35.39'
PI = N 2280770.65
E 6336618.03

COORDINATE TABLE					
Point No.	N	E	Inv. Elev.	Fitting	Size
17	2280946.69	6336476.01	2537.00	90° BEND	8"
18	2280928.08	6336470.32	2538.32	45° BEND	8"
20	2280928.93	6336453.82	2538.32	45° BEND	8"
22	2280909.34	6336411.42	2538.25	–	4"
23	2280891.98	6336426.40	2537.00	TEE	8"
25	2281008.64	6336500.79	2531.50	90° BEND	30"
28	2280885.25	6336532.31	2537.00	90° BEND	8"
31	2280898.03	6336421.48	2537.00	90° BEND	8"
32	2280835.88	6336694.71	2536.29	11.25° BEND	24"
33	2280847.45	6336510.36	2535.00	–	24"
34	2280998.76	6336521.36	2538.50	–	12"
35	2280981.55	6336622.18	2526.00	90° BEND	48"
37	2280989.16	6336495.34	2526.00	90° BEND	48"
38	2281073.33	6336587.20	2528.00	–	48"
39	2281087.64	6336602.79	2528.00	–	48"
40	2281124.79	6336643.35	2528.00	–	48"
43	2280780.09	6336621.81	2538.32	45° BEND	8"
44	2280769.16	6336724.03	2543.00	90° BEND	16"
50	2280769.16	6336769.90	2543.00	90° BEND	16"
54	2280968.22	6336441.96	2531.40	90° BEND	16"
59	2280781.07	6336602.91	2538.32	45° BEND	8"
63	2280914.69	6336683.45	2527.00	90° BEND	48"
67	2280930.32	6336733.83	2531.00	90° BEND	24"
70	2280826.55	6336572.89	2537.73	45° BEND	16"
72	2280947.98	6336665.77	2521.00	–	6"
73	2281013.26	6336508.41	2538.40	90° BEND	12"
77	2281035.02	6336550.77	2538.25	90° BEND	4"
78	2280866.15	6336717.23	2538.32	45° BEND	8"
80	2280930.42	6336646.60	2530.00	–	6"
85	2280825.71	6336685.31	2539.00	TEE	6"
89	2280789.27	6336718.18	2544.00	45° BEND	6"
109	2280895.98	6336416.92	2538.32	90° BEND	8"
120	2280788.86	6336610.70	2533.88	45° BEND	24"
121	2280778.76	6336610.26	2533.84	WYE	24"
122	2280879.06	6336706.93	2534.38	–	24"
123	2280876.95	6336706.83	2534.28	–	24"
125	2281032.58	6336566.42	2535.00	–	24"
131	2280853.91	6336659.33	2536.00	–	6"
132	2280852.43	6336660.67	2535.98	45° BEND	6"
133	2280845.21	6336660.32	2535.91	45° BEND	6"
134	2280771.78	6336579.96	2529.38	11.25° BEND	6"
136	2281052.57	6336540.22	2538.50	TEE	4"x2"

CATCH BASIN #1
INV ELEV (SE): 580.08

EX. FENCE

AERATION BASINS

Capped wye

SOLIDS FEED PUMP STATION

SOLIDS HOLDING TANK #2

SOLIDS HOLDING TANK #1

SOLIDS STORAGE BLOWERS

MEMBRANE BUILDING

ROUTE TEMP. 8" WAS LINE TO EXIST. MH. REMOVE OR ABANDON IN PHASE 2

REROUTE 24" EFFLUENT LINE FROM EXIST. AERATION BASIN #2 AND CONNECT TO EFFLUENT LINE FROM AERATION BASIN #3. REMOVE OR ABANDON IN PHASE 2.

PRE-CAST VAULTS SEE MBM-12

CHEMICAL PIPING (SEE MBM-12 FOR DETAILS)

RECYCLE STORAGE TANK #2

GAS CONNECTION TO BLDG. SEE DETAIL

PIPE SUPPORT SEE DETAIL (TYP. OF 2)

FIRE HYDRANT PER BCVWD PLATE 1 W/ 4"ø BOLLARDS

EQ PUMP STATION

CHEMICAL TANK FARM (SEE C1M-2)

Remove green highlights, add red

NOTES:

1. SEE SHEET C-33 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO FIELD VERIFY CROSSINGS AND CONNECTION POINTS.
3. DRAIN AND AIR PURGE ALL SULFURIC ACID PIPING FOLLOWING HYDRO TESTING.

ORIGINAL			
NO.	DATE	DESIGN	DRAWN	CHECKED
C	9/5/18	SLB	SLB	BPK
REVISIONS				
1	2/15/19	SLB	SLB	BPK
2	7/26/19	SLB	SLB	BPK
3	7/31/19	SLB	SLB	DS
4	10/11/19	SLB	SLB	BPK

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
CIVIL
AREA 5 YARD PIPING PLAN

AQUA ENGINEERING
533 W. 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256
ENGINEERING CONSULTANTS

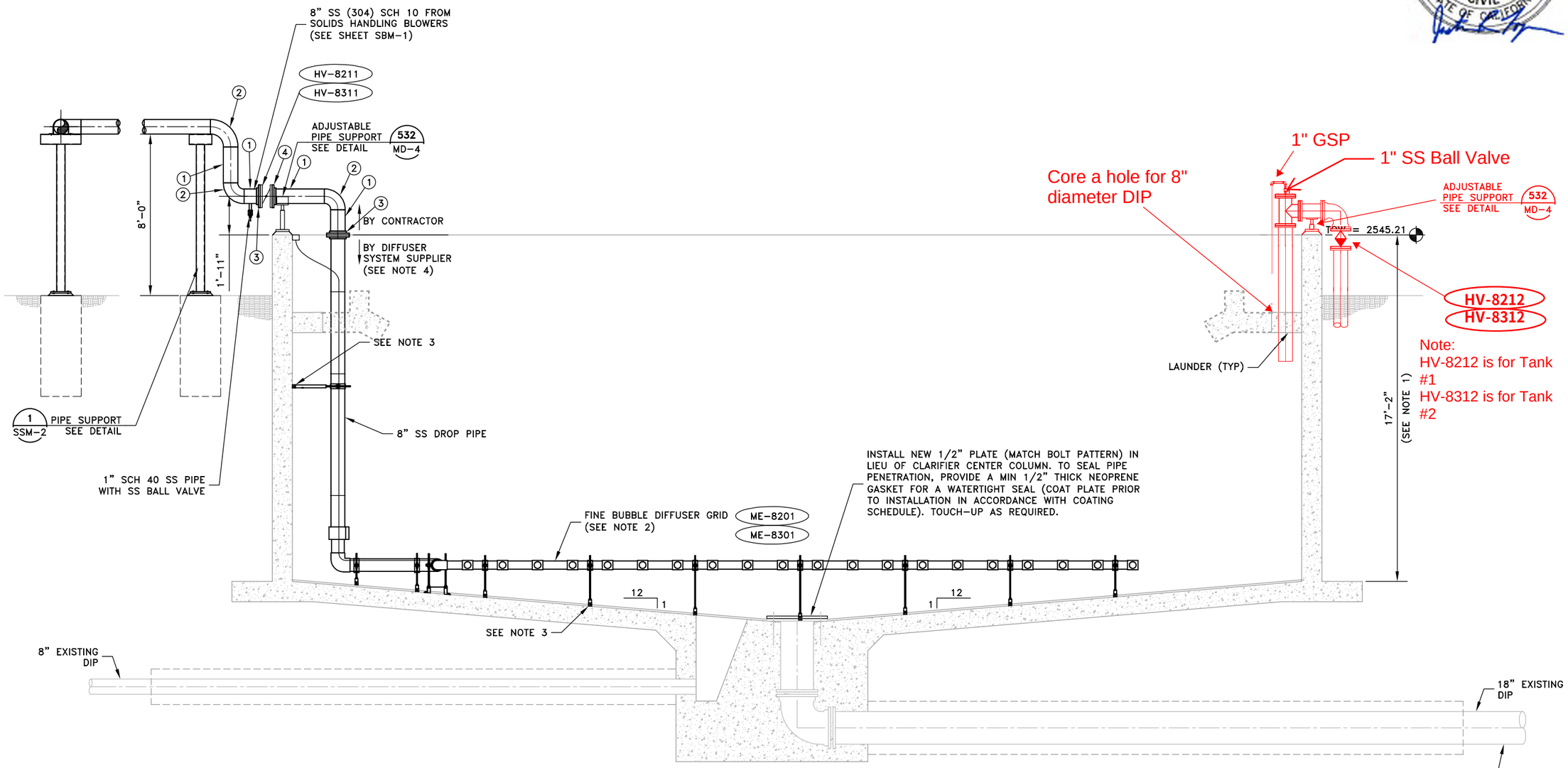
AREA 1 | AREA 2 | AREA 3 | AREA 4 | AREA 5 | AREA 6 | AREA 7 | AREA 8

1" = 20'
10 0 20

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

SHEET
C-23

G:\2017\17-0177\Drawings\Plan Sheets\17-0177-C-YP 10-10-19.dwg



Note: Coat pipe in accordance with coating schedule

Note:
HV-8212 is for Tank #1
HV-8312 is for Tank #2

NOTES:

1- CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING STRUCTURE PRIOR TO EQUIPMENT INSTALLATION.

2- COORDINATE EQUIPMENT INSTALLATION REQUIREMENTS WITH MANUFACTURER. VERIFY DIMENSIONS, CONNECTIONS, SUPPORTS, WEIGHTS, AND DETAILS.

3- INSTALL AND ANCHOR ALL EQUIPMENT TO CONCRETE PER MANUFACTURERS RECOMMENDATIONS.

4- FOR OWNER SELECTED EQUIPMENT SCOPE OF SUPPLY, SEE TECHNICAL SPECIFICATION SECTION 151100 – OWNER SELECTED EQUIPMENT.

5- PIPES HAVE BEEN ROTATED FOR CLARITY.

TYPICAL SECTION

A SSM-1, SSM-2

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

REGISTERED PROFESSIONAL ENGINEER
JUSTIN R. LOGAN
C 73749
CIVIL
STATE OF CALIFORNIA

ORIGINAL			
NO.	DATE	DESIGN	DRAWN	CHECKED
C	09/05/18	BP	BDP	JRL

REVISIONS

CITY OF BEAUMONT

SALT MITIGATION WWTP UPGRADE
SOLIDS HOLDING TANK # 1 & 2
MECHANICAL SECTION

AQUA ENGINEERING
533 W. 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PH: (951) 686-1070
FAX (951) 788-1256
ENGINEERING CONSULTANTS

0 1/2 1

DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

SHEET 232 of 334

SSM-3

DS 08/20/2018 X:\Beaumont\Salt Mitigation WWTP Upgrade WEBB170227\Drafting\SECONDARY CLARIFIERS\SSM-3.dwg

MWH CONSTRUCTORS

City of Beaumont
Wastewater Treatment Plant Salt Mitigation Upgrade Project

Technical Justification:

PCO-59	
Time Adjustment: WML TIA-07	TIA-07 SCE Delay Decommissioning Existing Power

Reason for Design Changes:

This delay impacted the demolition of the existing Blower Electrical Building subsequently delaying construction activities of the new Solids Processing Building and Sludge Loading Structure.

Cost Impact:

MWHC performed a P6 review of the contractor's Time Impact Analysis, TIA-07, for the relevant periods requested. The contractor's narrative along with MWHC's summary response is attached below.

MWHC recommends a time increase of 32-CD to MS02. With this time adjustment Final Completion will be September 1, 2021.

Shop Drawing Review

	Date 4/7/2021
To: W. M. Lyle Co. Attention: Oscar Mendoza	Project Owner City of Beaumont Project Name Beaumont WWTP Expansion
Reference Submittal 013200-31-Construction Progress Documentation-CPM	Construction Contract No. C18-80
Time Impact Analysis – TIA07	Specification Section 013200

Subject submittal has been reviewed and review action is as shown below:

Submittal No.	Subject	No. of Copies	No Exception Taken	Make Corrections Noted	Amend and Resubmit	Rejected Resubmit
13200-31	Schedule › TIA07 Name COB TIA07 All Activities As Planned COB TIA07 All Activities Impacted COB TIA07 Longest Path As Planned COB TIA07 Longest Path Impacted COB_Schedule Narrative_TIA07 (2) COB_TIA07_IMPACT.xer	e-files		X		

Summary of the Submittal:

- WML submitted TI07 showing impacts to the project milestones as the results of the following unforeseen events:

UFE 07 – SCE Delay Disconnecting Existing Power

This delay impacted the demolition of the existing blower #2 and subsequently the start of construction activities of the SFPS.

- WML's methodology for this TIA is comparing an unimpacted schedule just before the impact became known (September 2020 schedule update- UP21) with the impacted schedule by this UFE07 (TIA07)
- WML utilized UP21 schedule by introducing the UFE07 activities and called it TIA07-IMPACTschedule.
- WML then compared the milestones forecasted dates between the unimpacted and impacted schedule:

MILESTONE COMPARISON: AS PLANNED VS IMPACTED SCHEDULE

Total impact to the affected Project Milestone(s) resulting from Unforeseen Events:

Activity ID	Activity Name	OD	RD	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TIA 07 AS PLANNED						
MILESTONES						
MS00	NOTICE TO PROCEED (10/29/18)	0	0	29-Oct-18 A		
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0	0		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0	0		28-Jun-21	3
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0	0		27-Jul-21*	4

Activity ID	Activity Name	OD	RD	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TIA 07 IMPACTED						
MILESTONES						
MS00	NOTICE TO PROCEED (10/29/18)	0	0	29-Oct-18 A		
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0	0		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0	0		04-Aug-21	-34
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0	0		01-Sep-21*	-32

Project Completion – As Planned Schedule: July 27, 2021

Project Completion – Impacted Schedule: September 1, 2021

Impact resulting from SCE caused Unforeseen Events this Period:

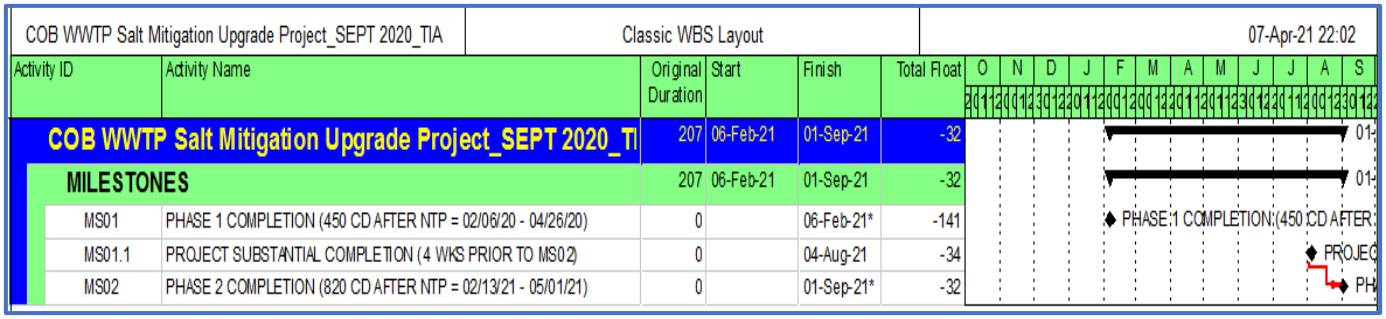
	MS01	MS02
Total Impact	0 CD	32 CD

Review Process:

The unimpacted schedule (UP01) reflects different milestone dates than what is shown on WML's unimpacted schedule.

COB WWTP Salt Mitigation Upgrade Project_SEPT 2020 | Classic WBS Layout | 07-Apr-21 22:05

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020		255	06-Nov-20	19-Jul-21	-79
MILESTONES		255	06-Nov-20	19-Jul-21	-79
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0		06-Nov-20*	-194
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0		18-Jun-21	-75
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0		19-Jul-21*	-79



COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TIA		Classic WBS Layout				07-Apr-21 22:02
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	O N D J F M A M J J A S
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TI		207	06-Feb-21	01-Sep-21	-32	
MILESTONES		207	06-Feb-21	01-Sep-21	-32	
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0		06-Feb-21*	-141	
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0		04-Aug-21	-34	
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0		01-Sep-21*	-32	

Revised MS02 date per CO 18: July 31, 2021

TIA07_IMPACT MS02 date: September 1, 2021

Ultimate impact to MS02: 32 days

Conclusion:

MWH agrees with the resulting impact UFE07 submitted by WML. Final time extension will be based on actual date of achieving MS02 with the understanding that WML is working diligently to improve the schedule.

It is important to note that MS01 date has not been impacted by UFE07 as shown in the schedule printouts above. MS01 continues to fall behind due to MBR commissioning issues.

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all qualities and dimensions; selecting fabrication processes and techniques of construction; coordinating work with other trades; an performing work in a safe and satisfactory manner.

Very truly yours,

Edmond Sayegh

EDMOND SAYEGH, P. E.

Sr. Construction Manager

City of Beaumont Waste Water Treatment Plant
Salt Mitigation Upgrade Project

Time Impact Analysis 07

WM Lyles Co.

INTRODUCTION

The following narrative outlines the Time Impact Analysis procedure and findings relating to the following Unforeseen Events (UFEs):

Unforeseen Event 07 – SCE delay in disconnecting existing power.

IDENTIFICATION OF SCHEDULE:

Schedule Update Base File:
COB_UP21

Schedule Analysis File:
COB_TIA07

TIME IMPACT ANALYSIS METHODOLOGY

The methodology used in this analysis follows a retroactive, "forward-looking" Time Impact Analysis (TIA) procedure. It compares the last approved schedule prior to the first impact event being analyzed to a copy of the same schedule with the addition of modeled schedule impact(s).

The modeled schedule impact events used in the analysis, herein are referred to as "Unforeseen Events" (UFEs), represent events that are believed to have impacted the schedule and could not have been reasonably foreseen at the time of submitting the original bid for construction. These events are beyond the control, and without fault or negligence of the General Contractor.

Change Orders 17 and 18 were incorporated into the schedule in the December 2020 update. These Change Orders included a time extension. In order to determine the non-concurrent impact due to the delay in SCE disconnecting the existing power, the finish constraint for MS01 Phase 1 Completion was adjusted to 9/18/20 and the finish constraint for Phase 2 Completion was adjusted to 7/31/21.

<u>Analysis procedure for TIA07:</u>

1. The last approved schedule (As-Planned Schedule) prior to first UFE being analyzed in TIA07 is the approved September 2020 Update, UP21.
2. The As-Planned schedule was copied to create the Impacted Schedule of comparison (TIA07)
3. UFE(s) being analyzed were logically inserted into the Impacted Schedule of comparison.
4. The affected Project Milestone(s) in the As-Planned schedule were compared to the affected Project Milestone(s) in the Impacted Schedule to quantify any impacts resulting from UFE(s).
5. The resulting delay is summarized in the Conclusion section of the narrative.

UNFORESEEN EVENTS

An Unforeseen Event (UFE) is defined herein as an impact to the project schedule that could not have been reasonably foreseen at the time of submitting a bid for construction and which is beyond the control and without fault or negligence of the General Contractor.

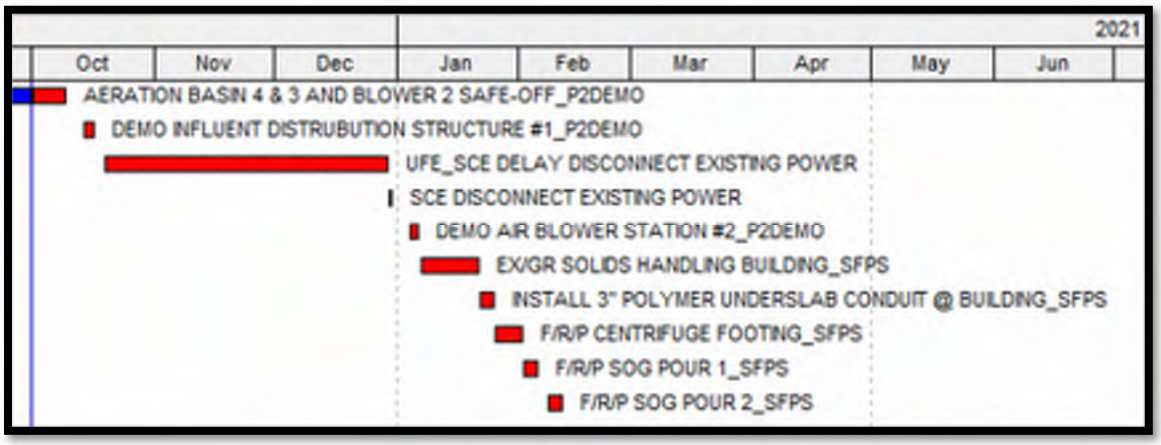
The following impact events have been analyzed in TIA07:

UFE 07 – SCE DELAY DISCONNECTING EXISTING POWER

A delay occurred in regard to SCE disconnecting the existing power. A request to terminate the SCE meters was submitted beginning of October 2020, SCE came out to the site on December 30, 2020 to disconnect power and remove the existing meters. This delay in disconnecting the power caused a delay to all the work that follows as construction could not begin in this area until these SCE meters were terminated.

LONGEST PATH

Below is a snippet of the impacted Longest Path.



MILESTONE COMPARISON: AS PLANNED VS IMPACTED SCHEDULE

Total impact to the affected Project Milestone(s) resulting from Unforeseen Events:

Activity ID	Activity Name	OD	RD	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TIA 07 AS PLANNED						
MILESTONES						
MS00	NOTICE TO PROCEED (10/29/18)	0	0	29-Oct-18 A		
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0	0		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0	0		28-Jun-21	3
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0	0		27-Jul-21*	4
Activity ID	Activity Name	OD	RD	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_SEPT 2020_TIA 07 IMPACTED						
MILESTONES						
MS00	NOTICE TO PROCEED (10/29/18)	0	0	29-Oct-18 A		
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)	0	0		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)	0	0		04-Aug-21	-34
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)	0	0		01-Sep-21*	-32

Project Completion – As Planned Schedule: July 27, 2021
Project Completion – Impacted Schedule: September 1, 2021

Impact resulting from SCE caused Unforeseen Events this Period:

	MS01	MS02
Total Impact	0 CD	32 CD

CONCLUSION

WML is requesting that the Phase 2 Completion Milestone be extended an additional 32 calendar days to compensate for the delay caused by SCE disconnecting existing power from October 2020 – December 2020.

ATTACHMENTS

P6 Schedule Analysis File: COB_TIA07- Impacted Schedule (September 20)

Technical Justification:

PCO-60	
Time Adjustment: WML TIA-08	TIA-08 Inclement Weather Impact Dec-2020 thru April-2021

Reason for Design Changes:

Inclement weather due to rain and high winds impact to the construction schedule from Dec, 3rd 2019 to April 26, 2021.

Cost Impact:

MWHC has performed a P6 review of the attached contractor's Time Impact Analysis, TIA, for the five relevant periods requested. The contractor's narrative along with MWHC's summary response is attached below.

MWHC recommends a non-compensable time increase of 23-CD to Final Project Completion, MS02. With no time adjustment for Phase 1 completion. A new Final Project Completion date of September 24, 2021.

Shop Drawing Review

	Date 8/25/2021
To: W. M. Lyle Co. Attention: Oscar Mendoza	Project Owner City of Beaumont Project Name Beaumont WWTP Expansion
Reference Submittal 013200-36-Construction Progress Documentation-CPM	Construction Contract No. C18-80
Time Impact Analysis – TIA08	Specification Section 013200

Subject submittal has been reviewed and review action is as shown below:

Submittal No.	Subject	No. of Copies	No Exception Taken	Make Corrections Noted	Amend and Resubmit	Rejected Resubmit
13200-36	Inclement Weather Impact TIA 8 incluing the following files: COB_Schedule Narrative_TIA08.pdf COB_TIA08.1.xer COB_TIA08.2.xer COB_TIA08.3.xer COB_TIA08.4.xer COB_TIA08.5.xer	e-files		X		

Summary of the Submittal:

WML submitted TI08 showing impacts to the project milestones as the results of inclement weather impact from December 2020 through April 2021. Th methodology is similar to the previous TIAs related to inclement weather delay impact.

For each month included in this TIA, WML compared the unimpacted monthly schedule update (no rain days) with the impacted schedule update (with rain days) and calculated the impact to the project milestones. The following table is a summary of this analysis:

Milestone	Period	Calendar Day Impact	Cumulative Impact
MS02	Dec 2020	-7	-7
	Jan 2021	-6	-13
	Feb 2021	-1	-14
	Mar 2021	-8	-22
	Apr 2021	-1	-23

Total cumulative impact to MS02 is 23 calendar days.

Review Process:

1. December 2020 has 4 rain days (on 12/3/20, 12/8/20, 12/28/20, and 12/29/20) that when applied to the unimpacted schedule shows the following impact:

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_NOV 2020				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)		06-Jan-21*	-255
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		07-Jul-21	-94
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)		04-Aug-21*	-95
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.1				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)		06-Jan-21*	-255
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		14-Jul-21	-101
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)		11-Aug-21*	-102

MS01= 0 days / MS02 = -7 days

2. January 2021 has 3 rain days (on 1/25/21, 1/26/21, and 1/29/21) that when applied to the unimpacted schedule shows the following impact:

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_DEC 2020				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		04-Aug-21	-34
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.2				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		09-Aug-21	-39
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		07-Sep-21*	-38

MS01= 0 days / MS02 = -6 days

3. February 2021 has 1 rain day (on 2/12/21) that when applied to the unimpacted schedule shows the following impact:

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_JAN 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		09-Mar-21*	-172
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		02-Aug-21	-32
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		30-Aug-21*	-30
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.3				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		09-Mar-21*	-172
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		03-Aug-21	-33
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		31-Aug-21*	-31

MS01= 0 days / MS02 = -1 day

4. March 2021 has 5 rain days (on 3/10/21, 3/11/21, 3/12/21. 3/15/21, and 3/31/21) that when applied to the unimpacted schedule shows the following impact:

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_FEB 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Apr-21*	-200
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		29-Jul-21	-28
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.4				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Apr-21*	-200
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		05-Aug-21	-35
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		09-Sep-21*	-40

MS01= 0 days / MS02 = -8 days

5. April 2021 has 1 rain day (on 4/26/21) that when applied to the unimpacted schedule shows the following impact:

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_MAR 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		07-May-21*	-231
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		30-Jul-21	-29
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.5				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		07-May-21*	-231
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		02-Aug-21	-32
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		02-Sep-21*	-33

MS01= 0 days / MS02 = -1 day

Summary inclement weather delay impact:

Milestone	Period	Calendar Day Impact	Cumulative Impact
MS01	Dec. 2020	0	0
	Jan. 2021	0	0
	Feb. 2021	0	0
	Mar. 2021	0	0
	Apr. 2021	0	0
MS02	Dec. 2020	-7	-7
	Jan. 2021	-6	-13
	Feb. 2021	-1	-14
	Mar. 2021	-8	-22
	Apr. 2021	-1	-23

Conclusion:

MWH concludes that the increment weather delay impact to MS02 milestone is 23 days. It is important to note that MS01 date has not been impacted by the inclement weather analyzed in this TIA08.

Corrections or comments made relative to submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all qualities and dimensions; selecting fabrication processes and techniques of construction; coordinating work with other trades; an performing work in a safe and satisfactory manner.

Very truly yours,

Edmond Sayegh

EDMOND SAYEGH, P. E.

Sr. Construction Manager

City of Beaumont Waste Water Treatment Plant
Salt Mitigation Upgrade Project

Time Impact Analysis 08

WM Lyles Co.

INTRODUCTION

The following narrative outlines the Time Impact Analysis procedure and findings relating to Unforeseen Event 08 – Inclement Weather Delays from December 2020 through April 2021. After performing the month-by-month windows analysis for the 14 weather days that occurred in this period, the total impact to the schedule was found to be 23 calendar days.

IDENTIFICATION OF SCHEDULE:

Schedule Update Base File:	Schedule Analysis File:
COB_UP23	COB_TIA08.1
COB_UP24	COB_TIA08.2
COB_UP25	COB_TIA08.3
COB_UP26	COB_TIA08.4
COB_UP27	COB_TIA08.5

TIME IMPACT ANALYSIS METHODOLOGY

The methodology used in this analysis follows a retroactive, "forward-looking" Time Impact Analysis (TIA) procedure. It compares the last approved schedule prior to the first impact event being analyzed to a copy of the same schedule with the addition of modeled schedule impact(s).

The modeled schedule impact events used in the analysis, herein are referred to as "Unforeseen Events" (UFEs), represent events that may impact the schedule and could not have been reasonably foreseen at the time of submitting the original bid for construction These events are beyond the control, and without fault or negligence of the General Contractor.

Analysis procedure for TIA08:

1. The last approved schedule (As-Planned Schedule) prior to first weather day being analyzed in TIA08 is the approved November 2020 Update, UP23.
2. The As-Planned schedule was copied to create the Impacted Schedule(s) of comparison (TIA08.1 – 5)
3. UFE(s) being analyzed were logically inserted into the Impacted Schedule of comparison. In this instance, original durations for specific activities were updated to reflect the additional time required to complete each impacted activity.
4. The affected Project Milestone(s) in the As-Planned schedule were compared to the affected Project Milestone(s) in the Impacted Schedule to quantify any impacts resulting from UFE(s).
5. This process was repeated for each subsequent update period impacted by inclement weather through the end of April 2021.

6. The resulting delay is broken down by impacted period and summarized by cumulative total in the Conclusion section of the narrative.

UNFORESEEN EVENTS

An Unforeseen Event (UFE) is defined herein as an impact to the project schedule that could not have been reasonably foreseen at the time of submitting a bid for construction and which is beyond the control and without fault or negligence of the General Contractor.

There have been a total of 67 unforeseen inclement (working) weather days which have directly impacted the critical path of the project schedule from the start of the project through the end of April 2021. 53 of these days have already been analyzed in a previous TIA. The remaining 14 weather days are broken down by period as shown below:

12/3/20, 12/8/20, 12/28/20, 12/29/20	(4)
1/25/21, 1/26/21, 1/29/21	(3)
2/12/21	(1)
3/10/21, 3/11/21, 3/12/21, 3/15/21, 3/31/21	(5)
4/26/21	(1)

UFE 08.1: INCLEMENT WEATHER DELAYS DEC 2020

During December 2020, 4 inclement weather days were recorded. Below is a screenshot comparing the as-planned schedule vs the weather impacted schedule for the analyzation period:

Milestone Comparison

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_NOV 2020				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)		06-Jan-21*	-255
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		07-Jul-21	-94
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)		04-Aug-21*	-95
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.1				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP = 02/06/20 - 04/26/20)		06-Jan-21*	-255
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		14-Jul-21	-101
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP = 02/13/21 - 05/01/21)		11-Aug-21*	-102

MS02: -7 Calendar Days

UFE 08.2: INCLEMENT WEATHER DELAYS JAN 2021

During January 2021, 3 inclement weather days were recorded. Below is a screenshot comparing the as-planned schedule vs the weather impacted schedule for the analyzation period:

Milestone Comparison

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_DEC 2020				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		04-Aug-21	-34
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.2				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Feb-21*	-141
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		09-Aug-21	-39
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		07-Sep-21*	-38

MS02: -6 Calendar Days

UFE 08.3: INCLEMENT WEATHER DELAYS FEB 2021

During February 2021, 1 inclement weather day was recorded. Below is a screenshot comparing the as-planned schedule vs the weather impacted schedule for the analyzation period:

Milestone Comparison

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_JAN 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		09-Mar-21*	-172
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		02-Aug-21	-32
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		30-Aug-21*	-30
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.3				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		09-Mar-21*	-172
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		03-Aug-21	-33
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		31-Aug-21*	-31

MS02: -1 Calendar Day

UFE 08.4: INCLEMENT WEATHER DELAYS MAR 2021

During March 2021, 5 inclement weather days were recorded. Below is a screenshot comparing the as-planned schedule vs the weather impacted schedule for the analyzation period:

Milestone Comparison

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_FEB 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Apr-21*	-200
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		29-Jul-21	-28
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.4				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		06-Apr-21*	-200
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		05-Aug-21	-35
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		09-Sep-21*	-40

MS02: -8 Calendar Days

UFE 08.5: INCLEMENT WEATHER DELAYS APR 2021

During April 2021, 1 inclement weather day was recorded. Below is a screenshot comparing the as-planned schedule vs the weather impacted schedule for the analyzation period:

Milestone Comparison

Activity ID	Activity Name	Start	Finish	Total Float
COB WWTP Salt Mitigation Upgrade Project_MAR 2021				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		07-May-21*	-231
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		30-Jul-21	-29
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		01-Sep-21*	-32
COB WWTP Salt Mitigation Upgrade Project_Time Impact Analysis 08.5				
MILESTONES				
MS01	PHASE 1 COMPLETION (450 CD AFTER NTP + 02/06/20 - 04/26/20 - 5/20/20 - 9/18/		07-May-21*	-231
MS01.1	PROJECT SUBSTANTIAL COMPLETION (4 WKS PRIOR TO MS02)		02-Aug-21	-32
MS02	PHASE 2 COMPLETION (820 CD AFTER NTP + 02/13/21 - 05/01/21 - 5/30/21 - 7/31/		02-Sep-21*	-33

MS02: -1 Calendar Day

CONCLUSION

WML is requesting that the Phase 2 Completion Milestone be extended an additional 23 calendar days to compensate for inclement weather delays from Dec 2020 – April 2021.

Milestone	Period	Calendar Day Impact	Cumulative Impact
MS02	Dec 2020	-7	-7
	Jan 2021	-6	-13
	Feb 2021	-1	-14
	Mar 2021	-8	-22
	Apr 2021	-1	**-23**

ATTACHMENTS

P6 Schedule Analysis File:	COB_TIA08.1- Impacted Schedule (Nov 20)
P6 Schedule Analysis File:	COB_TIA08.2- Impacted Schedule (Dec 20)
P6 Schedule Analysis File:	COB_TIA08.3 – Impacted Schedule (Jan 21)
P6 Schedule Analysis File:	COB_TIA08.4 – Impacted Schedule (Feb 21)
P6 Schedule Analysis File:	COB_TIA08.5 – Impacted Schedule (Mar 21)