PROPOSAL SUMMARY
BLUETECH ESTIMATING AND ENGINEERING SERVICES

Project:	T1 ENERGY
Address:	1211 E, 4TH STREET AUSTIN, TEXAS 78702
Scope:	PROCESS PIPING
Date:	11/3/2026

DIVISION	DESCRIPTION	MATERIAL COST	LABOR COST	MATERIAL TAX	LABOR TAX	EQUIPMENT COST	TOTAL COST	OVERHEADS	PROFIT	ADDITIONAL COST (If any)	TOTAL
DIV-01	**GENERAL REQUIREMENTS**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
DIV-40	**PROCESS INTERCONNECTIONS**	$ 79,749.43	$ 479,742.89	$ 6,579.33	$ 33,821.87	$ -	$ 599,893.52	$ 59,989.35	$ 59,989.35	$ -	$ 719,872.23
	TOTAL	**$ 79,749**	**$ 479,743**	**$ 6,579**	**$ 33,822**		**$ 599,894**	**$ 59,989**	**$ 59,989**	**$ -**	**$ 719,872**

BID SUMMARY			
1	**TOTAL MATERIAL COST**		**$ 79,749**
	MATERIAL SALES TAX	**8%**	$ 6,579
	JOB EXPENSE		
2	**TOTAL LABOR COST**		**$ 479,743**
	LABOR TAX	**7%**	$ 33,822
3	**TOTAL COST**		**$ 599,894**
	OVERHEADS @	**10%**	$ 59,989
	PROFIT @	**10%**	$ 59,989
4	**TOTAL COST W/ OVERHEADS + PROFIT**		**$ 719,872**
	BOND & INSURANCE	**0%**	$ -
	PROJECT SUPERVISION & PROJECT MANAGEMENT		$ -
	SUBMITTALS, SAMPLES, SHOP DRAWINGS, SITE SAFETY PLAN, ETC.		$ 1,104
	TEMPORARY FACILITIES & CONTROLS		$ -
	PROJECT SCHEDULE (Primavera P3 or P6)		$ -
	OFFICE OVERHEADS		$ -
	CLOSEOUT PROCEDURES		$ 1,840
	PERMITS		$ -
	ALLOWANCES		$ -
	MOBILIZATION / DEMOBILIZATION		$ 892
	SUB-CONTRACTS		$ -
	BOND PREMIUM	**0%**	$ -
5	**BASE BID PRICE**		**$ 723,708**

MAN-LOADING AND SUPERVISION ANALYSIS				
1	TOTAL MANHOURS WITH SUPERVISION			14,085
2	NUMBER OF MAN-DAYS			1,760.65
3	MAN LOAD			5
4	JOURNEYMAN RATE	3		$ 34.73
5	SUPERVISOR RATE	1		$ 43.01
6	UNSKILLED LABOR RATE	1		$ 24.51
7	COMPOSITE LABOR RATE			$ 34.34
8	WAGE RATE			$ 44.22

INSERT VALUES IN RESPECTIVE HIGHLIGHTED CELLS WHERE APPLICABLE



DETAILED TAKEOFF / ESTIMATE
BLUETECH ESTIMATING AND ENGINEERING SERVICES

Project Name	T1 ENERGY	PROJECT COST	$ 599,894
Location	1211 E, 4TH STREET AUSTIN, TEXAS 78702	OVERHEAD COST	$ 59,989
Project Scope:	PROCESS PIPING	PROFIT COST	$ 59,989
Addendum:	N/A	ADDITIONAL COST (If Any)	$ 3,836
Date:	Tuesday, November 3, 2026	TOTAL BID COST	$ 723,708
	BY OTHERS/ SEPERATE PERMIT/ BY OWNER	NEED QUOTATION	

SR #	DRAWING REF #	DIV	DESCRIPTION	QUANTITY	UNIT	WASTAGE	QUANTITY WITH WASTAGE	UNIT LABOR HOURS	TOTAL LABOR HOURS	UNIT MATERIAL COST	TOTAL MATERIAL COST	UNIT EQUIPMENT COST	TOTAL EQUIPMENT COST	UNIT LABOR COST	TOTAL LABOR COST	TOTAL COST	DIV COST
GENERAL REQUIREMENTS SUBGROUP WORK																	
		DIV-01	GENERAL REQUIREMENTS											Labor Rate	$ 24.33		
1			General Conditions	Permit (.07% of project value)	1	fee	0%	1.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2			General Conditions	Site development	1	fee	0%	1.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3			General Conditions	Variance	1	fee	0%	1.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4			General Conditions	Private inspections	1	fee	0%	1.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5			General Conditions	Debris haul off	34	load	0%	34.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6			General Conditions	Site plan	1	Fee	0%	1.00	0.000	0.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
							LABOR HOURS		0.000	MATERIAL COST	$ -	EQUIPMENT COST	$ -	LABOR COST	$ -	SUBTOTAL	$ -
FACILITY SERVICES SUBGROUP WORK																	
		DIV-40	PROCESS INTERCONNECTIONS											Labor Rate	$ 34.06		
			PLUMBING														
			Liquid PIPING														
			ADD1 - Additive 1 Pipe														
			DOUBLE WALLED SS TUBING WITH PTFE/PFA/PP LINING														
7	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Additive 1 Pipe	13	LF	10%	14.70	0.540	7.9		$ -	$ -	$ -	$ 18.39	$ 270.29	$ 270.29	
8	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 1 Pipe	76	LF	10%	83.60	0.540	45.1		$ -	$ -	$ -	$ 18.39	$ 1,537.60	$ 1,537.60	
			Fittings														
9	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.300	0.6		$ -	$ -	$ -	$ 10.22	$ 20.44	$ 20.44	
			ADD2 - Additive 2 Pipe														
			DOUBLE WALLED SS TUBING WITH PTFE/PFA/PP LINING														
10	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Additive 2 Pipe	130	LF	10%	143.00	0.540	77.2		$ -	$ -	$ -	$ 18.39	$ 2,630.11	$ 2,630.11	
11	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 2 Pipe	561	LF	10%	617.10	0.540	333.2		$ -	$ -	$ -	$ 18.39	$ 11,349.95	$ 11,349.95	
			Fittings														
12	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	1	EA	0%	1.00	0.270	0.3		$ -	$ -	$ -	$ 9.20	$ 9.20	$ 9.20	
13	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Tee	1	EA	0%	1.00	0.450	0.5		$ -	$ -	$ -	$ 15.33	$ 15.33	$ 15.33	
			ADD3 - Additive 3 Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
14	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Additive 3 Pipe	14	LF	10%	14.89	0.540	8.0		$ -	$ -	$ -	$ 18.39	$ 273.94	$ 273.94	
15	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 3 Pipe	78	LF	10%	85.80	0.540	46.3		$ -	$ -	$ -	$ 18.39	$ 1,578.07	$ 1,578.07	
			ADD4 - Below Grade Additive 4 Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
16	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Additive 4 Pipe	54	LF	10%	59.29	0.540	32.0		$ -	$ -	$ -	$ 18.39	$ 1,090.49	$ 1,090.49	
			Fittings														
17	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.300	0.9		$ -	$ -	$ -	$ 10.22	$ 30.65	$ 30.65	
			ADD4 - Above Grade Additive 4 Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
18	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Additive 4 Pipe	13	LF	10%	14.71	0.540	7.9		$ -	$ -	$ -	$ 18.39	$ 270.50	$ 270.50	
19	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 4 Pipe	62	LF	10%	67.74	0.540	36.6		$ -	$ -	$ -	$ 18.39	$ 1,245.86	$ 1,245.86	
20	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Additive 4 Pipe	54	LF	10%	59.31	0.783	46.4		$ -	$ -	$ -	$ 26.67	$ 1,581.79	$ 1,581.79	
			Fittings														
21	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.480	1.0		$ -	$ -	$ -	$ 16.35	$ 32.70	$ 32.70	
			ADD5 - Additive 5 Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
22	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 5 Pipe	495	LF	10%	544.02	0.540	293.8		$ -	$ -	$ -	$ 18.39	$ 10,005.76	$ 10,005.76	
			Fittings														
23	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.300	0.3		$ -	$ -	$ -	$ 10.22	$ 10.22	$ 10.22	
24	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	0.450	0.5		$ -	$ -	$ -	$ 15.33	$ 15.33	$ 15.33	
25	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Tee	1	EA	0%	1.00	0.450	0.5		$ -	$ -	$ -	$ 15.33	$ 15.33	$ 15.33	
26	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1" Dia Pipe Tee	2	EA	0%	2.00	0.540	1.1		$ -	$ -	$ -	$ 18.39	$ 36.78	$ 36.78	
27	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	1	EA	0%	1.00	0.270	0.3		$ -	$ -	$ -	$ 9.20	$ 9.20	$ 9.20	
			ADD6 - Additive 6 Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
28	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Additive 6 Pipe	186	LF	10%	204.60	0.540	110.5		$ -	$ -	$ -	$ 18.39	$ 3,763.09	$ 3,763.09	
29	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Additive 6 Pipe	181	LF	10%	198.84	0.540	107.4		$ -	$ -	$ -	$ 18.39	$ 3,657.07	$ 3,657.07	
			Fittings														
30	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.300	0.6		$ -	$ -	$ -	$ 10.22	$ 20.44	$ 20.44	
31	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.300	0.3		$ -	$ -	$ -	$ 10.22	$ 10.22	$ 10.22	
32	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.300	0.3		$ -	$ -	$ -	$ 10.22	$ 10.22	$ 10.22	
33	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	0.450	0.5		$ -	$ -	$ -	$ 15.33	$ 15.33	$ 15.33	
34	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	0.450	0.5		$ -	$ -	$ -	$ 15.33	$ 15.33	$ 15.33	
			TMAX - Trimethylaluminum Exhaust Pipe														
			STAINLESS STEEL, 316 SS, ANSI CLASS 150														
35	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Trimethylaluminum Exhaust Pipe	300	LF	10%	330.00	0.300	99.0		$ -	$ -	$ -	$ 10.22	$ 3,371.94	$ 3,371.94	
36	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Trimethylaluminum Exhaust Pipe	16	LF	10%	18.11	0.300	5.4		$ -	$ -	$ -	$ 10.22	$ 185.01	$ 185.01	
37	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Trimethylaluminum Exhaust Pipe	16	LF	10%	17.18	0.435	7.5		$ -	$ -	$ -	$ 14.82	$ 254.57	$ 254.57	
			Fittings														
38	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe 90 Deg Elbow	7	EA	0%	7.00	0.800	5.6		$ -	$ -	$ -	$ 27.25	$ 190.74	$ 190.74	
39	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.800	0.8		$ -	$ -	$ -	$ 27.25	$ 27.25	$ 27.25	
			CDA - Compressed Dry Air Pipe														
			STAINLESS STEEL, 304 SS, ANSI CLASS 150														
40	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Compressed Dry Air Pipe	97	LF	10%	106.84	0.300	32.1		$ -	$ -	$ -	$ 10.22	$ 1,091.72	$ 1,091.72	
41	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Compressed Dry Air Pipe	99	LF	10%	109.07	0.300	32.7		$ -	$ -	$ -	$ 10.22	$ 1,114.43	$ 1,114.43	
42	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Compressed Dry Air Pipe	37	LF	10%	40.89	0.322	13.2		$ -	$ -	$ -	$ 10.97	$ 448.42	$ 448.42	
			Fittings														
43	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.800	1.6		$ -	$ -	$ -	$ 27.25	$ 54.50	$ 54.50	
44	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		$ -	$ -	$ -	$ 40.87	$ 40.87	$ 40.87	
45	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Reducer	1	EA	0%	1.00	0.720	0.7		$ -	$ -	$ -	$ 24.52	$ 24.52	$ 24.52	
			HF - Hydrofluoric Acid Pipe														
			PVDF, NO DIFFERENTIATOR, ANSI CLASS 1														
46	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Hydrofluoric Acid Pipe	203	LF	10%	223.22	0.220	49.1		$ -	$ -	$ -	$ 7.49	$ 1,672.65	$ 1,672.65	
47	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Hydrofluoric Acid Pipe	960	LF	10%	1056.00	0.220	232.3		$ -	$ -	$ -	$ 7.49	$ 7,912.82	$ 7,912.82	
48	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Hydrofluoric Acid Pipe	153	LF	10%	168.21	0.228	38.4		$ -	$ -	$ -	$ 7.77	$ 1,306.28	$ 1,306.28	
49	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Hydrofluoric Acid Pipe	109	LF	10%	119.72	0.286	34.2		$ -	$ -	$ -	$ 9.74	$ 1,166.25	$ 1,166.25	
			Fittings														
50	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/4" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		$ -	$ -	$ -	$ 20.44	$ 20.44	$ 20.44	
51	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.600	1.2		$ -	$ -	$ -	$ 20.44	$ 40.87	$ 40.87	
52	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe 90 Deg Elbow	27	EA	0%	27.00	0.630	17.0		$ -	$ -	$ -	$ 21.46	$ 579.36	$ 579.36	
53	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	8	EA	0%	8.00	0.840	6.7		$ -	$ -	$ -	$ 28.61	$ 228.88	$ 228.88	
54	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	2	EA	0%	2.00	0.900	1.8		$ -	$ -	$ -	$ 30.65	$ 61.31	$ 61.31	
55	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe Tee	1	EA	0%	1.00	0.945	0.9		$ -	$ -	$ -	$ 32.19	$ 32.19	$ 32.19	
56	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe Tee	4	EA	0%	4.00	0.945	3.8		$ -	$ -	$ -	$ 32.19	$ 128.75	$ 128.75	
57	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe Tee	3	EA	0%	3.00	1.260	3.8		$ -	$ -	$ -	$ 42.92	$ 128.75	$ 128.75	
58	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Tee	1	EA	0%	1.00	0.900	0.9		$ -	$ -	$ -	$ 30.65	$ 30.65	$ 30.65	
59	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Tee	3	EA	0%	3.00	0.900	2.7		$ -	$ -	$ -	$ 30.65	$ 91.96	$ 91.96	
60	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe Tee	1	EA	0%	1.00	0.945	0.9		$ -	$ -	$ -	$ 32.19	$ 32.19	$ 32.19	
61	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	1	EA	0%	1.00	0.540	0.5		$ -	$ -	$ -	$ 18.39	$ 18.39	$ 18.39	
62	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" / 1" Dia Pipe Reducer	1	EA	0%	1.00	0.567	0.6		$ -	$ -	$ -	$ 19.31	$ 19.31	$ 19.31	
			HCL - Hydrochloric Acid Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
63	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Hydrochloric Acid Pipe	71	LF	10%	78.03	0.396	30.9		$ -	$ -	$ -	$ 13.49	$ 1,052.50	$ 1,052.50	
64	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Hydrochloric Acid Pipe	951	LF	10%	1045.97	0.396	414.2		$ -	$ -	$ -	$ 13.49	$ 14,107.77	$ 14,107.77	
			Fittings														
65	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		$ -	$ -	$ -	$ 20.44	$ 20.44	$ 20.44	
66	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		$ -	$ -	$ -	$ 20.44	$ 20.44	$ 20.44	
67	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	7	EA	0%	7.00	0.900	6.3		$ -	$ -	$ -	$ 30.65	$ 214.58	$ 214.58	
68	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Tee	2	EA	0%	2.00	0.900	1.8		$ -	$ -	$ -	$ 30.65	$ 61.31	$ 61.31	
69	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	1	EA	0%	1.00	0.540	0.5		$ -	$ -	$ -	$ 18.39	$ 18.39	$ 18.39	
			NAOH - Below Grade Sodium Hydroxide Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
70	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Sodium Hydroxide Pipe	12	LF	10%	13.65	0.396	5.4		$ -	$ -	$ -	$ 13.49	$ 184.12	$ 184.12	
71	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Sodium Hydroxide Pipe	48	LF	10%	52.47	0.396	20.8		$ -	$ -	$ -	$ 13.49	$ 707.70	$ 707.70	
			Fittings														
72	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.600	1.2		$ -	$ -	$ -	$ 20.44	$ 40.87	$ 40.87	
73	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		$ -	$ -	$ -	$ 20.44	$ 20.44	$ 20.44	
74	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	0.900	0.9		$ -	$ -	$ -	$ 30.65	$ 30.65	$ 30.65	
75	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	2	EA	0%	2.00	0.540	1.1		$ -	$ -	$ -	$ 18.39	$ 36.78	$ 36.78	
			NAOH - Sodium Hydroxide Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING, ELECTRIC TRACING & INSULATION														
76	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Sodium Hydroxide Pipe	100	LF	10%	110.00	0.396	43.6		$ -	$ -	$ -	$ 13.49	$ 1,483.65	$ 1,483.65	
77	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Sodium Hydroxide Pipe	347	LF	10%	381.70	0.396	151.2		$ -	$ -	$ -	$ 13.49	$ 5,148.28	$ 5,148.28	
78	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Sodium Hydroxide Pipe	772	LF	10%	849.20	0.411	349.0		$ -	$ -	$ -	$ 14.00	$ 11,887.66	$ 11,887.66	
79	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Sodium Hydroxide Pipe	106	LF	10%	116.53	0.515	60.0		$ -	$ -	$ -	$ 17.54	$ 2,044.11	$ 2,044.11	
			2" Insulation With Electric Tracing														
80	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Sodium Hydroxide Pipe	100	LF	10%	110.00	0.220	24.2		$ -	$ -	$ -	$ 7.49	$ 824.25	$ 824.25	
81	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Sodium Hydroxide Pipe	347	LF	10%	381.70	0.220	84.0		$ -	$ -	$ -	$ 7.49	$ 2,860.15	$ 2,860.15	
82	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Sodium Hydroxide Pipe	772	LF	10%	849.20	0.228	193.6		$ -	$ -	$ -	$ 7.77	$ 6,594.62	$ 6,594.62	
83	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Sodium Hydroxide Pipe	106	LF	10%	116.53	0.286	33.3		$ -	$ -	$ -	$ 9.74	$ 1,135.18	$ 1,135.18	
			Fittings														
84	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	5	EA	0%	5.00	0.600	3.0		$ -	$ -	$ -	$ 20.44	$ 102.18	$ 102.18	
85	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.600	1.2		$ -	$ -	$ -	$ 20.44	$ 40.87	$ 40.87	
86	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4"Dia Pipe Tee 90 Deg Elbow	26	EA	0%	26.00	0.945	24.6		$ -	$ -	$ -	$ 32.19	$ 836.85	$ 836.85	
87	000-DP-100, 100-DP-110, 100-	Process Interconnections	3"Dia Pipe Tee 90 Deg Elbow	14	EA	0%	14.00	1.260	17.6		$ -	$ -	$ -	$ 42.92	$ 600.82	$ 600.82	
88	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	0.900	0.9		$ -	$ -	$ -	$ 30.65	$ 30.65	$ 30.65	
89	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4"Dia Pipe Tee	4	EA	0%	4.00	0.945	3.8		$ -	$ -	$ -	$ 32.19	$ 128.75	$ 128.75	
90	000-DP-100, 100-DP-110, 100-	Process Interconnections	3"Dia Pipe Tee	5	EA	0%	5.00	1.260	6.3		$ -	$ -	$ -	$ 42.92	$ 214.58	$ 214.58	
91	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" / 1" Dia Pipe Tee	2	EA	0%	2.00	0.945	1.9		$ -	$ -	$ -	$ 32.19	$ 64.37	$ 64.37	
92	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" / 3/4" Dia Pipe Tee	3	EA	0%	3.00	0.945	2.8		$ -	$ -	$ -	$ 32.19	$ 96.56	$ 96.56	
93	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" / 3/4" Dia Pipe Reducer	1	EA	0%	1.00	0.567	0.6		$ -	$ -	$ -	$ 19.31	$ 19.31	$ 19.31	
			UPWR - Ultrapure Water Return Pipe														
			PVDF, ANSI CLASS 1														
94	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Ultrapure Water Return Pipe	232	LF	10%	255.20	0.220	56.1		$ -	$ -	$ -	$ 7.49	$ 1,912.26	$ 1,912.26	
95	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Ultrapure Water Return Pipe	83	LF	10%	91.63	0.236	21.6		$ -	$ -	$ -	$ 8.04	$ 736.54	$ 736.54	
96	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Ultrapure Water Return Pipe	153	LF	10%	167.82	0.253	42.5		$ -	$ -	$ -	$ 8.62	$ 1,446.10	$ 1,446.10	
97	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Ultrapure Water Return Pipe	931	LF	10%	1024.10	0.286	292.9		$ -	$ -	$ -	$ 9.74	$ 9,975.92	$ 9,975.92	
98	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Ultrapure Water Return Pipe	897	LF	10%	986.70	0.319	314.8		$ -	$ -	$ -	$ 10.87	$ 10,720.63	$ 10,720.63	
			Fittings														
99	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	8	EA	0%	8.00	0.600	4.8		$ -	$ -	$ -	$ 20.44	$ 163.49	$ 163.49	
100	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		$ -	$ -	$ -	$ 20.44	$ 20.44	$ 20.44	
101	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.660	1.3		$ -	$ -	$ -	$ 22.48	$ 44.96	$ 44.96	
102	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	10	EA	0%	10.00	0.840	8.4		$ -	$ -	$ -	$ 28.61	$ 286.10	$ 286.10	
103	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.960	2.9		$ -	$ -	$ -	$ 32.70	$ 98.09	$ 98.09	
104	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	7	EA	0%	7.00	0.900	6.3		$ -	$ -	$ -	$ 30.65	$ 214.58	$ 214.58	
105	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Pipe Tee	4	EA	0%	4.00	0.990	4.0		$ -	$ -	$ -	$ 33.72	$ 134.88	$ 134.88	
106	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe Tee	2	EA	0%	2.00	1.260	2.5		$ -	$ -	$ -	$ 42.92	$ 85.83	$ 85.83	
107	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Tee	3	EA	0%	3.00	1.440	4.3		$ -	$ -	$ -	$ 49.05	$ 147.14	$ 147.14	
108	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" / 1" Dia Pipe Tee	1	EA	0%	1.00	1.260	1.3		$ -	$ -	$ -	$ 42.92	$ 42.92	$ 42.92	
109	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" / 3/4" Dia Pipe Tee	1	EA	0%	1.00	1.440	1.4		$ -	$ -	$ -	$ 49.05	$ 49.05	$ 49.05	
110	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" / 3" Dia Pipe Tee	3	EA	0%	3.00	1.440	4.3		$ -	$ -	$ -	$ 49.05	$ 147.14	$ 147.14	
111	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" / 3" Dia Pipe Reducer	1	EA	0%	1.00	0.864	0.9		$ -	$ -	$ -	$ 29.43	$ 29.43	$ 29.43	

DETAILED TAKEOFF / ESTIMATE
BLUETECH ESTIMATING AND ENGINEERING SERVICES

FEDES

Project Name	T1 ENERGY	PROJECT COST	$ 599,894
Location	1211 E, 4TH STREET AUSTIN, TEXAS 78702	OVERHEAD COST	$ 59,989
Project Scope:	PROCESS PIPING	PROFIT COST	$ 59,989
Addendum:	N/A	ADDITIONAL COST (If Any)	$ 3,836
Date:	Tuesday, November 3, 2026	TOTAL BID COST	$ 723,708

BY OTHERS/ SEPERATE PERMIT/ BY OWNER | NEED QUOTATION

SR #	DRAWING REF #	DIV	DESCRIPTION	QUANTITY	UNIT	WASTAGE	QUANTITY WITH WASTAGE	UNIT LABOR HOURS	TOTAL LABOR HOURS	UNIT MATERIAL COST	TOTAL MATERIAL COST	UNIT EQUIPMENT COST	TOTAL EQUIPMENT COST	UNIT LABOR COST	TOTAL LABOR COST	TOTAL COST	DIV COST
			H2O2 - Hydrogen Peroxide Pipe														
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
112	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Hydrogen Peroxide Pipe	85	LF	10%	93.50	0.396	37.0		-	-	-	13.49	1,261.11	1,261.11	
113	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Hydrogen Peroxide Pipe	655	LF	10%	720.91	0.396	285.5		-	-	-	13.49	9,723.42	9,723.42	
114	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4"Dia Hydrogen Peroxide Pipe	221	LF	10%	243.10	0.411	99.9		-	-	-	14.00	3,403.07	3,403.07	
115	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Hydrogen Peroxide Pipe	7	LF	10%	7.52	0.455	3.4		-	-	-	15.50	116.60	116.60	
116	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Hydrogen Peroxide Pipe	108	LF	10%	118.58	0.515	61.1		-	-	-	17.54	2,080.00	2,080.00	
			Fittings														
117	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.600	1.2		-	-	-	20.44	40.87	40.87	
118	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.600	0.6		-	-	-	20.44	20.44	20.44	
119	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe 45 Deg Elbow	3	EA	0%	3.00	0.630	1.9		-	-	-	21.46	64.37	64.37	
120	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Pipe 90 Deg Elbow	36	EA	0%	36.00	0.630	22.7		-	-	-	21.46	772.48	772.48	
121	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.720	1.4		-	-	-	24.52	49.05	49.05	
122	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	6	EA	0%	6.00	0.840	5.0		-	-	-	28.61	171.66	171.66	
123	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe Tee	2	EA	0%	2.00	0.900	1.8		-	-	-	30.65	61.31	61.31	
124	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4"Dia Pipe Tee	6	EA	0%	6.00	0.945	5.7		-	-	-	32.19	193.12	193.12	
125	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4"Dia Pipe Cross Tee	1	EA	0%	1.00	0.945	0.9		-	-	-	32.19	32.19	32.19	
126	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	1	EA	0%	1.00	1.080	1.1		-	-	-	36.78	36.78	36.78	
127	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe Tee	4	EA	0%	4.00	1.260	5.0		-	-	-	42.92	171.66	171.66	
128	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" / 2" Dia Pipe Tee	1	EA	0%	1.00	1.260	1.3		-	-	-	42.92	42.92	42.92	
			GN2 - General Nitrogen Pipe														
			STAINLESS STEEL, 304 SS, ANSI CLASS 150														
129	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia General Nitrogen Pipe	48	LF	10%	52.80	0.300	15.8		-	-	-	10.22	539.51	539.51	
			Fittings														
130	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.800	2.4		-	-	-	27.25	81.74	81.74	
131	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	5	EA	0%	5.00	1.200	6.0		-	-	-	40.87	204.36	204.36	
			TMAX - Trimethylamine Exhaust Pipe														
			STAINLESS STEEL, 316 SS, ANSI CLASS 150														
132	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Trimethylamine Exhaust Pipe	320	LF	10%	352.00	0.300	105.6		-	-	-	10.22	3,596.74	3,596.74	
			Fittings														
133	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe 90 Deg Elbow	11	EA	0%	11.00	0.800	8.8		-	-	-	27.25	299.73	299.73	
134	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		-	-	-	40.87	40.87	40.87	
			DAC - Dilute Acid WW Pipe														
			CPVC, ANSI CLASS 150														
135	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Dilute Acid Pipe	13	LF	10%	13.90	0.129	1.8	10.77	149.75	-	-	4.39	61.09	210.84	
136	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Dilute Acid Pipe	88	LF	10%	96.59	0.156	15.1		-	-	-	5.31	513.22	513.22	
137	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Dilute Acid Pipe	320	LF	10%	351.87	0.174	61.2		-	-	-	5.93	2,085.32	2,085.32	
138	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Dilute Acid Pipe	314	LF	10%	345.50	0.210	72.6		-	-	-	7.15	2,471.22	2,471.22	
139	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Dilute Acid Pipe (ELECTRIC TRACED & INSULATED)	1531	LF	10%	1684.10	0.138	232.4	14.94	25,160.45	-	-	4.70	7,915.74	33,076.20	
140	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Dilute Acid Pipe (ELECTRIC TRACED & INSULATED)	283	LF	10%	311.30	0.174	54.2		-	-	-	5.93	1,844.90	1,844.90	
			Fittings														
141	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 45 Deg Elbow	2	EA	0%	2.00	0.490	1.0		-	-	-	16.69	33.38	33.38	
142	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	5	EA	0%	5.00	0.420	2.1	27.62	138.10	-	-	14.31	71.53	209.63	
143	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.490	0.5		-	-	-	16.69	16.69	16.69	
144	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	16	EA	0%	16.00	0.560	9.0		-	-	-	19.07	305.18	305.18	
145	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe 90 Deg Elbow	4	EA	0%	4.00	0.700	2.8		-	-	-	23.94	95.37	95.37	
146	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	2	EA	0%	2.00	0.630	1.3	36.79	73.58	-	-	21.46	42.92	116.50	
147	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Tee	5	EA	0%	5.00	0.840	4.2		-	-	-	28.61	143.05	143.05	
148	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe Tee	2	EA	0%	2.00	1.050	2.1		-	-	-	35.76	71.53	71.53	
149	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1" Dia Pipe Tee	1	EA	0%	1.00	0.630	0.6		-	-	-	21.46	21.46	21.46	
150	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1-1/2" Dia Pipe Tee	1	EA	0%	1.00	0.630	0.6		-	-	-	21.46	21.46	21.46	
151	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 3/4" Dia Pipe Tee	2	EA	0%	2.00	0.630	1.3		-	-	-	21.46	42.92	42.92	
			AEX - Acid Exhaust Pipe														
			POLYPROPYLENE, ANSI CLASS 150														
152	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/4" Dia Acid Exhaust Pipe (STAINLESS STEEL, 316 SS, ANSI CLASS 150)	33	LF	10%	36.25	0.180	6.5		-	-	-	6.13	222.21	222.21	
153	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Acid Exhaust Pipe	112	LF	10%	123.54	0.207	25.6		-	-	-	7.05	871.07	871.07	
154	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Acid Exhaust Pipe	6	LF	10%	7.03	0.315	2.2		-	-	-	10.73	75.41	75.41	
155	000-DP-100, 100-DP-110, 100-	Process Interconnections	8" Dia Acid Exhaust Pipe	52	LF	10%	57.63	0.369	21.3		-	-	-	12.57	724.29	724.29	
			Fittings														
156	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/4" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.500	0.5		-	-	-	17.03	17.03	17.03	
157	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	7	EA	0%	7.00	0.600	4.2		-	-	-	20.44	143.05	143.05	
158	000-DP-100, 100-DP-110, 100-	Process Interconnections	8" Dia Pipe 90 Deg Elbow	7	EA	0%	7.00	1.200	8.4		-	-	-	40.87	286.10	286.10	
159	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	1	EA	0%	1.00	0.900	0.9		-	-	-	30.65	30.65	30.65	
160	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" / 3" Dia Pipe Tee	2	EA	0%	2.00	1.500	3.0		-	-	-	51.09	102.18	102.18	
161	000-DP-100, 100-DP-110, 100-	Process Interconnections	8" / 6" Dia Pipe Tee	2	EA	0%	2.00	1.800	3.6		-	-	-	61.31	122.62	122.62	
			RO - Reverse Osmosis Water Pipe														
			CPVC, ANSI CLASS 150 WITH ELECTRIC TRACING & INSULATION														
162	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4"Dia Reverse Osmosis Water Pipe	6	LF	10%	7.12	0.120	0.9	4.39	31.24	-	-	4.09	29.09	60.33	
163	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2"Dia Reverse Osmosis Water Pipe	687	LF	10%	755.70	0.129	97.5	10.77	8,138.89	-	-	4.39	3,320.35	11,459.24	
164	000-DP-100, 100-DP-110, 100-	Process Interconnections	3"Dia Reverse Osmosis Water Pipe	818	LF	10%	899.80	0.156	140.4		-	-	-	5.31	4,780.96	4,780.96	
			2" Insulation With Electric Tracing														
165	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4"Dia Reverse Osmosis Water Pipe	6	LF	10%	7.12	0.120	0.9	4.39	31.24	-	-	4.09	29.09	60.33	
166	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2"Dia Reverse Osmosis Water Pipe	687	LF	10%	755.70	0.129	97.5	10.77	8,138.89	-	-	4.39	3,320.35	11,459.24	
167	000-DP-100, 100-DP-110, 100-	Process Interconnections	3"Dia Reverse Osmosis Water Pipe	818	LF	10%	899.80	0.156	140.4		-	-	-	5.31	4,780.96	4,780.96	
			Fittings														
168	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4"Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.350	0.7	5.98	11.96	-	-	11.92	23.84	35.80	
169	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.385	0.4	22.87	22.87	-	-	13.11	13.11	35.98	
170	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.490	0.5		-	-	-	16.69	16.69	16.69	
171	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2"Dia Pipe Tee	18	EA	0%	18.00	0.578	10.4	33.05	594.90	-	-	19.69	354.36	949.26	
172	000-DP-100, 100-DP-110, 100-	Process Interconnections	3"Dia Pipe Tee	2	EA	0%	2.00	0.735	1.5		-	-	-	25.03	50.07	50.07	
173	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1/2" Dia Pipe Tee	1	EA	0%	1.00	0.578	0.6		-	-	-	19.69	19.69	19.69	
174	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" / 1" Dia Pipe Reducer	3	EA	0%	3.00	0.347	1.0		-	-	-	11.82	35.46	35.46	
			UPW - Ultrapure Water Pipe														
			PVDF, ANSI CLASS 150														
175	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Ultrapure Water Pipe	25	LF	10%	27.68	0.236	6.5		-	-	-	8.04	222.46	222.46	
176	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Ultrapure Water Pipe	156	LF	10%	171.39	0.286	49.0		-	-	-	9.74	1,669.55	1,669.55	
177	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Ultrapure Water Pipe	900	LF	10%	990.00	0.319	315.8		-	-	-	10.87	10,756.49	10,756.49	
178	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Ultrapure Water Pipe	85	LF	10%	93.50	0.385	36.0		-	-	-	13.11	1,226.07	1,226.07	
179	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Ultrapure Water Pipe (HEAT CONSERVATION INSULATION)	26	LF	10%	28.60	0.060	1.7		-	-	-	2.04	58.45	58.45	
180	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Ultrapure Water Pipe (HEAT CONSERVATION INSULATION)	26	LF	10%	28.60	0.060	1.7		-	-	-	2.04	58.45	58.45	
			Fittings														
181	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.660	1.3		-	-	-	22.48	44.96	44.96	
182	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.840	0.8		-	-	-	28.61	28.61	28.61	
183	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	8	EA	0%	8.00	0.960	7.7		-	-	-	32.70	261.58	261.58	
184	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Tee	3	EA	0%	3.00	1.440	4.3		-	-	-	49.05	147.14	147.14	
185	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Cross Tee	1	EA	0%	1.00	1.440	1.4		-	-	-	49.05	49.05	49.05	
186	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" / 2" Dia Pipe Tee	1	EA	0%	1.00	1.260	1.3		-	-	-	42.92	42.92	42.92	
187	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" / 3" Dia Pipe Tee	2	EA	0%	2.00	1.440	2.9		-	-	-	49.05	98.09	98.09	
188	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" / 3" Dia Pipe Tee	5	EA	0%	5.00	1.440	7.2		-	-	-	49.05	245.23	245.23	
189	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" / 4" Dia Pipe Tee	1	EA	0%	1.00	1.800	1.8		-	-	-	61.31	61.31	61.31	
190	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" / 1" Dia Pipe Reducer	1	EA	0%	1.00	0.594	0.6		-	-	-	20.23	20.23	20.23	
			CAC - Concentrated Acid WW Pipe														
			POLYPROPYLENE, ANSI CLASS 150														
191	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Concentrated Acid WW Pipe	357	LF	10%	392.70	0.261	102.5		-	-	-	8.89	3,490.97	3,490.97	
192	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Concentrated Acid WW Pipe	151	LF	10%	165.70	0.315	52.2		-	-	-	10.73	1,777.82	1,777.82	
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
193	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6" Concentrated Acid WW Pipe	535	LF	10%	588.50	0.470	276.6		-	-	-	16.01	9,420.83	9,420.83	
			Fittings														
194	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 45 Deg Elbow	2	EA	0%	2.00	0.800	1.6		-	-	-	27.25	54.50	54.50	
195	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	15	EA	0%	15.00	0.800	12.0		-	-	-	27.25	408.72	408.72	
196	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6" Pipe 90 Deg Elbow	12	EA	0%	12.00	0.800	9.6		-	-	-	27.25	326.98	326.98	
197	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	1.000	2.0		-	-	-	34.06	68.12	68.12	
198	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Tee	2	EA	0%	2.00	1.200	2.4		-	-	-	40.87	81.74	81.74	
199	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe Tee	1	EA	0%	1.00	1.500	1.5		-	-	-	51.09	51.09	51.09	
200	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6" Pipe Tee	2	EA	0%	2.00	1.200	2.4		-	-	-	40.87	81.74	81.74	
			DAL - Dilute Alkali WW Pipe														
			POLYPROPYLENE, ANSI CLASS 150														
201	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Dilute Alkali WW Pipe (ELECTRIC TRACED & INSULATED)	923	LF	10%	1015.30	0.207	210.2		-	-	-	7.05	7,158.29	7,158.29	
202	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Dilute Alkali WW Pipe (ELECTRIC TRACED & INSULATED)	1007	LF	10%	1107.70	0.234	259.2		-	-	-	7.97	8,828.41	8,828.41	
203	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Dilute Alkali WW Pipe	305	LF	10%	336.04	0.261	87.7		-	-	-	8.89	2,987.27	2,987.27	
			Fittings														
204	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.600	1.8		-	-	-	20.44	61.31	61.31	
205	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	19	EA	0%	19.00	0.700	13.3		-	-	-	23.84	453.00	453.00	
206	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 45 Deg Elbow	2	EA	0%	2.00	0.800	1.6		-	-	-	27.25	54.50	54.50	
207	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	5	EA	0%	5.00	0.800	4.0		-	-	-	27.25	136.24	136.24	
208	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	1	EA	0%	1.00	0.900	0.9		-	-	-	30.65	30.65	30.65	
209	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe Tee	4	EA	0%	4.00	1.050	4.2		-	-	-	35.76	143.05	143.05	
210	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		-	-	-	40.87	40.87	40.87	
			O2 - Oxygen Pipe														
			STAINLESS STEEL, 316 SS, BRIGHT ANNEALED TUBING														
211	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Oxygen Pipe	117	LF	10%	128.90	0.345	44.5		-	-	-	11.75	1,514.64	1,514.64	
212	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Oxygen Pipe	400	LF	10%	439.82	0.345	151.7		-	-	-	11.75	5,168.24	5,168.24	
			Fittings														
213	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	7	EA	0%	7.00	0.960	6.7		-	-	-	32.70	228.88	228.88	
			GWW - General Waste Water Pipe														
			CPVC, ANSI CLASS 150														
214	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia General Waste Water Pipe	871	LF	10%	958.10	0.138	132.2	14.94	14,314.01	-	-	4.70	4,503.34	18,817.35	
			2" Insulation With Electric Tracing														
215	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia General Waste Water Pipe	871	LF	10%	958.10	0.138	132.2	14.94	14,314.01	-	-	4.70	4,503.34	18,817.35	
			Fittings														
216	000-DP-100, 100-DP-110, 100-	Process Interconnections	2"Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.420	1.3	27.62	82.86	-	-	14.31	42.92	125.78	
217	000-DP-100, 100-DP-110, 100-	Process Interconnections	2"Dia Pipe Tee	3	EA	0%	3.00	0.630	1.9	36.79	110.37	-	-	21.46	64.37	174.74	
			CAL - Concentrated Alkaline WW Pipe														
			CPVC, ANSI CLASS 150														
218	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Concentrated Alkaline WW Pipe	149	LF	10%	164.16	0.156	25.6		-	-	-	5.31	872.26	872.26	
219	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x3"Dia Concentrated Alkaline WW Pipe	32	LF	10%	35.21	0.174	6.1		-	-	-	5.93	208.68	208.68	
			DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING														
220	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Concentrated Alkaline WW Pipe	270	LF	10%	297.00	0.313	93.0		-	-	-	10.66	3,166.25	3,166.25	
221	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Concentrated Alkaline WW Pipe	615	LF	10%	676.79	0.378	255.8		-	-	-	12.87	8,713.40	8,713.40	
222	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6"Dia Concentrated Alkaline WW Pipe	554	LF	10%	609.40	0.313	190.7		-	-	-	10.66	6,496.68	6,496.68	
			Fittings														
223	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 45 Deg Elbow	2	EA	0%	2.00	0.560	1.1		-	-	-	19.07	38.15	38.15	
224	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6"Dia Pipe 45 Deg Elbow	4	EA	0%	4.00	0.560	2.2		-	-	-	19.07	76.29	76.29	
225	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.490	1.0		-	-	-	16.69	33.38	33.38	
226	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.560	1.7		-	-	-	19.07	57.22	57.22	
227	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe 90 Deg Elbow	4	EA	0%	4.00	0.700	2.8		-	-	-	23.94	95.37	95.37	
228	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6"Dia Pipe 90 Deg Elbow	11	EA	0%	11.00	0.560	6.2		-	-	-	19.07	209.81	209.81	
229	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6" Pipe 90 Deg Elbow	3	EA	0%	3.00	0.560	1.7		-	-	-	19.07	57.22	57.22	
230	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Pipe Tee	1	EA	0%	1.00	0.735	0.7		-	-	-	25.03	25.03	25.03	
231	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Dia Pipe Tee	1	EA	0%	1.00	1.050	1.1		-	-	-	35.76	35.76	35.76	
232	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6" Pipe Tee	1	EA	0%	1.00	0.840	0.8		-	-	-	28.61	28.61	28.61	
233	000-DP-100, 100-DP-110, 100-	Process Interconnections	4"x6"Dia Pipe Tee	1	EA	0%	1.00	0.840	0.8		-	-	-	28.61	28.61	28.61	
			GEX - General Exhaust Pipe														
			POLYPROPYLENE, ANSI CLASS 150														
234	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia General Exhaust Pipe	39	LF	10%	42.90	0.234	10.0		-	-	-	7.97	341.91	341.91	

DETAILED TAKEOFF / ESTIMATE
BLUETECH ESTIMATING AND ENGINEERING SERVICES

Project Name	T1 ENERGY	PROJECT COST	$ 599,894
Location	1211 E, 4TH STREET AUSTIN, TEXAS 78702	OVERHEAD COST	$ 59,989
Project Scope:	PROCESS PIPING	PROFIT COST	$ 59,989
Addendum:	N/A	ADDITIONAL COST (If Any)	$ 3,836
Date:	Tuesday, November 3, 2026	TOTAL BID COST	$ 723,708
	BY OTHERS/ SEPERATE PERMIT/ BY OWNER	NEED QUOTATION	

SR #	DRAWING REF #	DIV	DESCRIPTION	QUANTITY	UNIT	WASTAGE	QUANTITY WITH WASTAGE	UNIT LABOR HOURS	TOTAL LABOR HOURS	UNIT MATERIAL COST	TOTAL MATERIAL COST	UNIT EQUIPMENT COST	TOTAL EQUIPMENT COST	UNIT LABOR COST	TOTAL LABOR COST	TOTAL COST	DIV COST
235	000-DP-100, 100-DP-110, 100-	Process Interconnections	DOUBLE WALLED SS TUBING With PTFE/PFA/PP LINING 3" Dia General Exhaust Pipe	6	LF	10%	6.60	0.421	2.8		$ -	$ -	$ -	$ 14.34	$ 94.64	$ 94.64	
236	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 3" Dia Pipe 90 Deg Elbow	6	EA	0%	6.00	0.700	4.2		$ -	$ -	$ -	$ 23.84	$ 143.05	$ 143.05	
237	000-DP-100, 100-DP-110, 100-	Process Interconnections	NH3 - Ammonia Waste Water Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 2" Dia Ammonia Waste Water Pipe	202	LF	10%	222.20	0.345	76.7		$ -	$ -	$ -	$ 11.75	$ 2,611.01	$ 2,611.01	
238	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Ammonia Waste Water Pipe	65	LF	10%	71.67	0.390	27.9		$ -	$ -	$ -	$ 13.28	$ 951.95	$ 951.95	
239	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Insulation With Electric Tracing 2" Dia Ammonia Waste Water Pipe	202	LF	10%	222.20	0.345	76.7		$ -	$ -	$ -	$ 11.75	$ 2,611.01	$ 2,611.01	
240	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Ammonia Waste Water Pipe	65	LF	10%	71.67	0.390	27.9		$ -	$ -	$ -	$ 13.28	$ 951.95	$ 951.95	
			GASEOUS PIPING STAINLESS STEEL, 316 SS, BRIGHT ANNEALED TUBING NPN2 - Below Grade High Purity Nitrogen Pipe														
241	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia High Purity Nitrogen Pipe	8	LF	10%	9.06	0.300	2.7		$ -	$ -	$ -	$ 10.22	$ 92.62	$ 92.62	
242	000-DP-100, 100-DP-110, 100-	Process Interconnections	HPN2 - High Purity Nitrogen Pipe STAINLESS STEEL, 304 SS, BRIGHT ANNEALED TUBING 1/2" Dia High Purity Nitrogen Pipe	800	LF	10%	880.00	0.300	264.0		$ -	$ -	$ -	$ 10.22	$ 8,991.84	$ 8,991.84	
243	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia High Purity Nitrogen Pipe STAINLESS STEEL, 316 SS, BRIGHT ANNEALED TUBING	10	LF	10%	10.48	0.300	3.1		$ -	$ -	$ -	$ 10.22	$ 107.12	$ 107.12	
244	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia High Purity Nitrogen Pipe	1516	LF	10%	1667.60	0.300	500.3		$ -	$ -	$ -	$ 10.22	$ 17,039.54	$ 17,039.54	
245	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia High Purity Nitrogen Pipe	1501	LF	10%	1651.10	0.345	569.6		$ -	$ -	$ -	$ 11.75	$ 19,401.58	$ 19,401.58	
246	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	101	EA	0%	101.00	0.800	80.8		$ -	$ -	$ -	$ 27.25	$ 2,752.05	$ 2,752.05	
247	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	1	EA	0%	1.00	0.800	0.8		$ -	$ -	$ -	$ 27.25	$ 27.25	$ 27.25	
248	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	40	EA	0%	40.00	0.800	32.0		$ -	$ -	$ -	$ 27.25	$ 1,089.92	$ 1,089.92	
249	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	11	EA	0%	11.00	0.960	10.6		$ -	$ -	$ -	$ 32.70	$ 359.67	$ 359.67	
250	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	55	EA	0%	55.00	1.200	66.0		$ -	$ -	$ -	$ 40.87	$ 2,247.96	$ 2,247.96	
251	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe Tee	2	EA	0%	2.00	1.200	2.4		$ -	$ -	$ -	$ 40.87	$ 81.74	$ 81.74	
252	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	36	EA	0%	36.00	1.200	43.2		$ -	$ -	$ -	$ 40.87	$ 1,471.39	$ 1,471.39	
253	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Cross Pipe Tee	3	EA	0%	3.00	1.200	3.6		$ -	$ -	$ -	$ 40.87	$ 122.62	$ 122.62	
254	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe Tee	7	EA	0%	7.00	1.440	10.1		$ -	$ -	$ -	$ 49.05	$ 343.32	$ 343.32	
255	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Tee	53	EA	0%	53.00	1.200	63.6		$ -	$ -	$ -	$ 40.87	$ 2,166.22	$ 2,166.22	
256	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1/2" Dia Pipe Tee	7	EA	0%	7.00	1.440	10.1		$ -	$ -	$ -	$ 49.05	$ 343.32	$ 343.32	
257	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1" Dia Pipe Tee	3	EA	0%	3.00	1.440	4.3		$ -	$ -	$ -	$ 49.05	$ 147.14	$ 147.14	
258	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" / 2" Dia Pipe Tee	1	EA	0%	1.00	1.680	1.7		$ -	$ -	$ -	$ 57.22	$ 57.22	$ 57.22	
259	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Reducer	7	EA	0%	7.00	0.720	5.0		$ -	$ -	$ -	$ 24.52	$ 171.66	$ 171.66	
260	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 3/4" Dia Pipe Reducer	2	EA	0%	2.00	0.720	1.4		$ -	$ -	$ -	$ 24.52	$ 49.05	$ 49.05	
261	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 1/2" Dia Pipe Reducer	1	EA	0%	1.00	0.864	0.9		$ -	$ -	$ -	$ 29.43	$ 29.43	$ 29.43	
262	000-DP-100, 100-DP-110, 100-	Process Interconnections	HPO2 - High Purity Oxygen Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/2" Dia High Purity Oxygen Pipe	53	LF	10%	58.72	0.300	17.6		$ -	$ -	$ -	$ 10.22	$ 599.98	$ 599.98	
263	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia High Purity Oxygen Pipe	351	LF	10%	386.53	0.300	116.0		$ -	$ -	$ -	$ 10.22	$ 3,949.55	$ 3,949.55	
264	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia High Purity Oxygen Pipe	378	LF	10%	415.56	0.345	143.4		$ -	$ -	$ -	$ 11.75	$ 4,883.10	$ 4,883.10	
265	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.800	2.4		$ -	$ -	$ -	$ 27.25	$ 81.74	$ 81.74	
266	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia Pipe 90 Deg Elbow	11	EA	0%	11.00	0.960	10.6		$ -	$ -	$ -	$ 32.70	$ 359.67	$ 359.67	
267	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Tee	22	EA	0%	22.00	1.200	26.4		$ -	$ -	$ -	$ 40.87	$ 899.18	$ 899.18	
268	000-DP-100, 100-DP-110, 100-	Process Interconnections	UPN2 - Ultra High Purity Nitrogen Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/2" Dia Ultra High Purity Nitrogen Pipe	278	LF	10%	306.12	0.300	91.8		$ -	$ -	$ -	$ 10.22	$ 3,127.92	$ 3,127.92	
269	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	4	EA	0%	4.00	0.800	3.2		$ -	$ -	$ -	$ 27.25	$ 108.99	$ 108.99	
270	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	6	EA	0%	6.00	1.200	7.2		$ -	$ -	$ -	$ 40.87	$ 245.23	$ 245.23	
271	000-DP-100, 100-DP-110, 100-	Process Interconnections	SIH4 - Silane Pipe DOUBLE WALLED SS TUBING, PTFE/PFA/PP LINING, SS 316 WITH ELECTROPOLISHED FINISH 1/4" Dia Silane Pipe	84	LF	10%	92.43	0.540	49.9		$ -	$ -	$ -	$ 18.39	$ 1,700.06	$ 1,700.06	
272	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Silane Pipe	913	LF	10%	1004.30	0.540	542.3		$ -	$ -	$ -	$ 18.39	$ 18,471.49	$ 18,471.49	
273	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/4" Dia Pipe 90 Deg Elbow	6	EA	0%	6.00	0.800	4.8		$ -	$ -	$ -	$ 27.25	$ 163.49	$ 163.49	
274	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe 90 Deg Elbow	9	EA	0%	9.00	0.800	7.2		$ -	$ -	$ -	$ 27.25	$ 245.23	$ 245.23	
275	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		$ -	$ -	$ -	$ 40.87	$ 40.87	$ 40.87	
276	000-DP-100, 100-DP-110, 100-	Process Interconnections	NH3 - Ammonia Exhaust Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/2" Dia Ammonia Exhaust Pipe	87	LF	10%	95.26	0.300	28.6		$ -	$ -	$ -	$ 10.22	$ 973.37	$ 973.37	
277	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Ammonia Exhaust Pipe	558	LF	10%	613.70	0.300	184.1		$ -	$ -	$ -	$ 10.22	$ 6,270.80	$ 6,270.80	
278	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	2	EA	0%	2.00	0.800	1.6		$ -	$ -	$ -	$ 27.25	$ 54.50	$ 54.50	
279	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe 90 Deg Elbow	3	EA	0%	3.00	0.800	2.4		$ -	$ -	$ -	$ 27.25	$ 81.74	$ 81.74	
280	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		$ -	$ -	$ -	$ 40.87	$ 40.87	$ 40.87	
281	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Tee	2	EA	0%	2.00	1.200	2.4		$ -	$ -	$ -	$ 40.87	$ 81.74	$ 81.74	
282	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" / 1/2" Dia Pipe Reducer	1	EA	0%	1.00	0.720	0.7		$ -	$ -	$ -	$ 24.52	$ 24.52	$ 24.52	
283	000-DP-100, 100-DP-110, 100-	Process Interconnections	N2O - Nitrous Oxide Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/2" Dia Nitrous Oxide Pipe	1073	LF	10%	1180.30	0.300	354.1		$ -	$ -	$ -	$ 10.22	$ 12,060.31	$ 12,060.31	
284	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	7	EA	0%	7.00	0.800	5.6		$ -	$ -	$ -	$ 27.25	$ 190.74	$ 190.74	
285	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Pipe Tee	3	EA	0%	3.00	1.200	3.6		$ -	$ -	$ -	$ 40.87	$ 122.62	$ 122.62	
286	000-DP-100, 100-DP-110, 100-	Process Interconnections	NH3 - Ammonia Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/2" Dia Ammonia Pipe	122	LF	10%	133.82	0.300	40.1		$ -	$ -	$ -	$ 10.22	$ 1,367.32	$ 1,367.32	
287	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Ammonia Pipe	713	LF	10%	784.37	0.300	235.3		$ -	$ -	$ -	$ 10.22	$ 8,014.65	$ 8,014.65	
288	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Insulation With Electric Tracing 1/2" Dia Ammonia Pipe	122	LF	10%	133.82	0.300	40.1		$ -	$ -	$ -	$ 10.22	$ 1,367.32	$ 1,367.32	
289	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Ammonia Pipe	713	LF	10%	784.37	0.300	235.3		$ -	$ -	$ -	$ 10.22	$ 8,014.65	$ 8,014.65	
290	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/2" Dia Pipe 90 Deg Elbow	5	EA	0%	5.00	0.800	4.0		$ -	$ -	$ -	$ 27.25	$ 136.24	$ 136.24	
291	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe 90 Deg Elbow	6	EA	0%	6.00	0.800	4.8		$ -	$ -	$ -	$ 27.25	$ 163.49	$ 163.49	
292	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		$ -	$ -	$ -	$ 40.87	$ 40.87	$ 40.87	
293	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" / 1/2" Dia Pipe Tee	1	EA	0%	1.00	1.200	1.2		$ -	$ -	$ -	$ 40.87	$ 40.87	$ 40.87	
294	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" / 1/2" Dia Pipe Tee	2	EA	0%	2.00	1.200	2.4		$ -	$ -	$ -	$ 40.87	$ 81.74	$ 81.74	
295	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" / 3/4" Dia Pipe Tee	1	EA	0%	1.00	1.440	1.4		$ -	$ -	$ -	$ 49.05	$ 49.05	$ 49.05	
296	000-DP-100, 100-DP-110, 100-	Process Interconnections	BCL3 - Boron Trichloride Pipe STAINLESS STEEL, 316 SS, ELECTROPOLISHED TUBING 1/4" Dia Boron Trichloride Pipe	81	LF	10%	89.10	0.300	26.7		$ -	$ -	$ -	$ 10.22	$ 910.42	$ 910.42	
297	000-DP-100, 100-DP-110, 100-	Process Interconnections	Fittings 1/4" Dia Pipe 90 Deg Elbow	4	EA	0%	4.00	0.800	3.2		$ -	$ -	$ -	$ 27.25	$ 108.99	$ 108.99	
			VALVESS & DEVICES														
298	000-DP-100, 100-DP-110, 100-	Process Interconnections	Valve 1/2" Dia Angle Valve	1	EA	0%	1.00	0.725	0.7		$ -	$ -	$ -	$ 24.69	$ 24.69	$ 24.69	
299	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia PSV Valve	6	EA	0%	6.00	0.725	4.4		$ -	$ -	$ -	$ 24.69	$ 148.16	$ 148.16	
300	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Angle Valve	2	EA	0%	2.00	0.725	1.5		$ -	$ -	$ -	$ 24.69	$ 49.39	$ 49.39	
301	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Ball Valve	76	EA	0%	76.00	0.725	55.1		$ -	$ -	$ -	$ 24.69	$ 1,876.71	$ 1,876.71	
302	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia Gate Valve	1	EA	0%	1.00	0.725	0.7		$ -	$ -	$ -	$ 24.69	$ 24.69	$ 24.69	
303	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia Ball Valve	4	EA	0%	4.00	0.787	3.1		$ -	$ -	$ -	$ 26.81	$ 107.22	$ 107.22	
304	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Ball Valve	18	EA	0%	18.00	0.850	15.3		$ -	$ -	$ -	$ 28.95	$ 521.12	$ 521.12	
305	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Ball Valve	5	EA	0%	5.00	0.850	4.3		$ -	$ -	$ -	$ 28.95	$ 144.76	$ 144.76	
306	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia Valve	1	EA	0%	1.00	0.850	0.9		$ -	$ -	$ -	$ 28.95	$ 28.95	$ 28.95	
307	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Angle Valve	3	EA	0%	3.00	0.912	2.7		$ -	$ -	$ -	$ 31.06	$ 93.19	$ 93.19	
308	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia Ball Valve	26	EA	0%	26.00	0.912	23.7		$ -	$ -	$ -	$ 31.06	$ 807.63	$ 807.63	
309	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Dia PSV Angle Valve	6	EA	0%	6.00	0.912	5.5		$ -	$ -	$ -	$ 31.06	$ 186.38	$ 186.38	
310	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia PVRV 3 Way Valve	2	EA	0%	2.00	1.100	2.2		$ -	$ -	$ -	$ 37.47	$ 74.93	$ 74.93	
311	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia Ball Valve	14	EA	0%	14.00	1.350	18.9		$ -	$ -	$ -	$ 45.98	$ 643.73	$ 643.73	
312	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia PVRV 3 Way Valve	2	EA	0%	2.00	1.350	2.7		$ -	$ -	$ -	$ 45.98	$ 91.96	$ 91.96	
313	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Dia PVRV Valve	2	EA	0%	2.00	1.350	2.7		$ -	$ -	$ -	$ 45.98	$ 91.96	$ 91.96	
314	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Dia TP Ball Valve	1	EA	0%	1.00	0.850	0.9		$ -	$ -	$ -	$ 28.95	$ 28.95	$ 28.95	
315	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Dia TP Ball Valve	20	EA	0%	20.00	0.725	14.5		$ -	$ -	$ -	$ 24.69	$ 493.87	$ 493.87	
316	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Dia TP Ball Valve	2	EA	0%	2.00	0.975	2.0		$ -	$ -	$ -	$ 33.21	$ 66.42	$ 66.42	
317	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Dia TP Ball Valve	1	EA	0%	1.00	1.100	1.1		$ -	$ -	$ -	$ 37.47	$ 37.47	$ 37.47	
318	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Dia TP Ball Valve	5	EA	0%	5.00	0.787	3.9		$ -	$ -	$ -	$ 26.81	$ 134.03	$ 134.03	
319	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Dia TP Gate Valve	1	EA	0%	1.00	1.600	1.6		$ -	$ -	$ -	$ 54.50	$ 54.50	$ 54.50	
320	000-DP-100, 100-DP-110, 100-	Process Interconnections	Pipe Supports 1/2" Clevis Hanger	1045	EA	0%	1045.00	0.300	313.5	$ 1.69	$ 1,766.05	$ -	$ -	$ 10.22	$ 10,677.81	$ 12,443.86	
321	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Clevis Hanger	343	EA	0%	343.00	0.300	102.9	$ 2.19	$ 751.17	$ -	$ -	$ 10.22	$ 3,504.77	$ 4,255.94	
322	000-DP-100, 100-DP-110, 100-	Process Interconnections	1" Clevis Hanger	1077	EA	0%	1077.00	0.300	323.1	$ 2.19	$ 2,358.63	$ -	$ -	$ 10.22	$ 11,004.79	$ 13,363.42	
323	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/4" Clevis Hanger	191	EA	0%	191.00	0.300	57.3	$ 2.95	$ 563.45	$ -	$ -	$ 10.22	$ 1,951.64	$ 2,515.09	
324	000-DP-100, 100-DP-110, 100-	Process Interconnections	1-1/2" Clevis Hanger	106	EA	0%	106.00	0.300	31.8	$ 2.79	$ 295.74	$ -	$ -	$ 10.22	$ 1,083.11	$ 1,378.85	
325	000-DP-100, 100-DP-110, 100-	Process Interconnections	2" Clevis Hanger	774	EA	0%	774.00	0.300	232.2	$ 3.49	$ 2,701.26	$ -	$ -	$ 10.22	$ 7,908.73	$ 10,609.99	
326	000-DP-100, 100-DP-110, 100-	Process Interconnections	3" Clevis Hanger	296	EA	0%	296.00	0.350	103.6		$ -	$ -	$ -	$ 11.92	$ 3,528.62	$ 3,528.62	
327	000-DP-100, 100-DP-110, 100-	Process Interconnections	4" Clevis Hanger	286	EA	0%	286.00	0.350	100.1		$ -	$ -	$ -	$ 11.92	$ 3,409.41	$ 3,409.41	
328	000-DP-100, 100-DP-110, 100-	Process Interconnections	6" Clevis Hanger	218	EA	0%	218.00	0.350	76.3		$ -	$ -	$ -	$ 11.92	$ 2,598.78	$ 2,598.78	
329	000-DP-100, 100-DP-110, 100-	Process Interconnections	8" Clevis Hanger	4	EA	0%	4.00	0.350	1.4		$ -	$ -	$ -	$ 11.92	$ 47.68	$ 47.68	
330	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/8" Threaded Rods	1062	EA	0%	1062.00	0.000	0.0		$ -	$ -	$ -	$ -	$ -	$ -	
331	000-DP-100, 100-DP-110, 100-	Process Interconnections	1/2" Threaded Rods	90	EA	0%	90.00	0.000	0.0		$ -	$ -	$ -	$ -	$ -	$ -	
332	000-DP-100, 100-DP-110, 100-	Process Interconnections	5/8" Threaded Rods	152	EA	0%	152.00	0.000	0.0		$ -	$ -	$ -	$ -	$ -	$ -	
333	000-DP-100, 100-DP-110, 100-	Process Interconnections	3/4" Threaded Rods	2	EA	0%	2.00	0.000	0.0		$ -	$ -	$ -	$ -	$ -	$ -	
334	000-DP-100, 100-DP-110, 100-	Process Interconnections	Trenching And Backfilling Trenching And Backfilling For Below Slab Pipes	363	CY	10%	399.30	0.500	199.7		$ -	$ -	$ -	$ 17.03	$ 6,800.08	$ 6,800.08	
							LABOR HOURS	14085.229	MATERIAL COST	$ 79,749.43	EQUIPMENT COST	$ -	LABOR COST	$ 479,742.89	SUBTOTAL		$ 559,492.32

TOTAL MATERIAL COST	$ 79,749
TOTAL LABOR COST	$ 479,743
TOTAL EQUIPMET COST	$ -
TOTAL LABOR HOURS	14,085

PRICING NOTES & QA | T1 ENERGY G2 - PROCESS PIPING (DIV 40)

1211 E 4th Street, Austin TX 78702 | Industrial / high-purity process piping (Div 40) | Open shop | Priced 2026-10-08 | Takeoff only

1. EXECUTIVE PRICING SUMMARY

#	Item	Workbook (live)	Independent calc	Variance	Basis / cell reference
1	Base Bid Price (block 1)	$723,708.23	$723,708.23	$0.00	PROPOSAL SUMMARY E37

#	Direct cost component (all sheets)	Value	Notes
1	Material (before tax)	$79,749.43	Sum of line material, all detail sheets
2	Labor (base wage + fringe)	$479,742.89	Sum of line labor at the rate the template formula actually uses
3	Equipment	$0.00	Line equipment (template: unit equipment x labor hours)
4	Additional costs carried in summary rows	$3,836.00	Div-01 items with no template line; itemized in section 6
5	Total labor hours	14,085.2	Detail sheets that feed the bid total

#	Count	Value	Notes
1	Takeoff line items reviewed	334	All quantity lines on all detail sheets, incl. Div-01 template lines
2	Line items priced (non-zero)	324	
3	Lines left blank with NEED QUOTATION fill	307	Material not priced: no published price found, or fixture/equipment per FEDES rule. Listed in section 7
4	Allowances	0	Section 8
5	Discrepancies identified	1	Section 9
6	High / critical risks	3	Section 13
7	Template formula issues	0	Section 15

No plans or specifications were provided. Quantities are priced as received and could not be checked against drawings.
Most of this job is high-purity and chemical process piping (PVDF, polypropylene, 316 SS electropolished and bright-annealed tubing, double-walled lined systems). None of these have published prices; they are NEED QUOTATION with installation labor carried. Only CPVC Sch 80 (to 2 in), copper and clevis hangers are priced.
Pipefitting workers comp for Texas was NOT found and is NOT included.
Project name sits in the "Project" cell but address and scope rows are shifted on the summary (C2 project, C3 address, C4 scope).

2. PRICING METHODOLOGY

- Only input cells were written: unit labor hours (I), unit material (K), unit equipment (M = 0), division labor rates, Div-01 inputs and the summary tax / OH&P / bond / additional-cost / man-loading rate cells. No formula, sheet, row, column, merge, unit or quantity was changed.

- Labor = crew composite rate x unit hours x quantity with waste. Statutory payroll burden goes through the template LABOR TAX cell.
- Labor: unit hours by material family and size (SS orbital-weld tubing 0.30, PVDF 0.22, PP 0.18, CPVC 0.12, copper 0.10 MH/LF at 1 in, +15% per inch of size, x1.8 for double-wall). Fittings 0.3-1.6 MH each by material, tees x1.5. Estimator judgment for clean-build industrial work.
- Material priced only where an exact published price exists; Cooney Brothers CPVC prices run at list.

3. WAGE BUILD-UP

#	Classification	Base wage $/hr	Fringe $/hr	Rate (base+fringe)	Statutory burden	Loaded $/hr	Source / effective date
1	Pipefitter (47-2152)	$30.20	$4.53	$34.73	$2.45	$37.18	OEWS 2025 Austin-Round Rock-San Marcos median $30.20 [W1]
2	Welder (51-4121)	$28.39	$4.26	$32.65	$2.31	$34.96	OEWS 2025 Austin MSA median $28.39 [W1]
3	Working foreman (47-1011)	$37.40	$5.61	$43.01	$3.00	$46.01	OEWS 2025 Austin MSA median $37.40 [S1]
4	Pipefitter helper (47-3015)	$21.31	$3.20	$24.51	$1.77	$26.27	OEWS 2025 Austin MSA median $21.31 [W1]
5	Construction laborer (47-2061)	$21.16	$3.17	$24.33	$1.76	$26.09	OEWS 2025 Austin MSA median $21.16 [S1]

#	Statutory burden component	Rate	Source
1	FICA	7.65%	
2	FUTA effective	0.07%	
3	TX unemployment 2.7% on $9,000 (effective)	0.39%	TWC 2026
4	Workers comp (pipefitting): NOT FOUND, NOT INCLUDED	0.00%	

#	Division / sheet	Crew	Rate entered	Burden on rate	Cell
1	DETAILED TAKEOFF DIV-01 GENERAL REQUIREMENTS	Laborer	$24.33	7.22%	DETAILED TAKEOFF!O11
2	DETAILED TAKEOFF DIV-40 PROCESS INTERCONNECTIONS	3 pipefitters + 1 welder + 1 working	$34.06	7.05%	DETAILED TAKEOFF!O21

Summary block 'BASE BID PRICE': LABOR TAX D19 = 7.05% (labor-weighted burden of the divisions in the block); MATERIAL SALES TAX D16 = 8.25%; OH 10%, profit 10%.

4. MATERIAL PRICING BASIS AND LABOR PRODUCTIVITY

Ref	Material / item	Unit	Price carried	Source	Notes
P2	Sch 80 CPVC pipe, 90s, tees (Spears/Charlotte)	LF/EA	3.22 to 36.79	Cooney Brothers	List-level pricing
P1	Type L copper; Caddy clevis hangers	LF/EA	1.69 to 51.84	HD Supply, Zoro	

Labor production rates (unit hours) are FEDES estimator judgment for the stated conditions. No published RSMeans, NECA, MCAA or NRCA unit-hour data could be accessed during this review; each rate is shown on the line table in section 18 so it can be checked against company history.

5. SALES TAX BASIS

- Austin 8.25% on materials (new construction treatment) [T2].
- Not verified: Texas manufacturing exemption (Tax Code 151.318) can apply to some process equipment and piping for manufacturers; confirm with the owner. If it applies, material tax drops out.

6. DIVISION 01 / GENERAL REQUIREMENTS BASIS

#	Item	Location	Carried	Status	Basis
1	Permit / site items	rows 12-17	$0.00	N/A	Owner/GC.
2	Project Supervision	PROPOSAL	$0.00	N/A	
3	Submittals	PROPOSAL	$1,104.00	Carried	24 MH material certs, weld procedures, isometrics review
4	Temporary Facilities	PROPOSAL	$0.00	N/A	
5	Project Schedule	PROPOSAL	$0.00	N/A	
6	Office Overheads	PROPOSAL	$0.00	N/A	
7	Closeout	PROPOSAL	$1,840.00	Carried	40 MH pressure/leak testing documentation, turnover packages
8	Permits	PROPOSAL	$0.00	N/A	
9	Allowances	PROPOSAL	$0.00	N/A	
10	Mobilization	PROPOSAL	$892.00	Carried	Mobilize fabrication tools (orbital welder setup not priced)
11	Sub-Contracts	PROPOSAL	$0.00	N/A	Passivation, cleaning, third-party inspection not priced

7. VENDOR QUOTES REQUIRED / NEED QUOTATION LINES

#	Sheet!row	Item	Qty	Unit	Labor carried?	Reason material is blank
1	DETAILED TAKEOFF!26	3/4" Dia Additive 1 Pipe	14.7	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
2	DETAILED TAKEOFF!27	1" Dia Additive 1 Pipe	83.6	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
3	DETAILED TAKEOFF!30	1" Dia Pipe 90 Deg	2	EA	Yes	CU fitting price not published
4	DETAILED TAKEOFF!34	3/4" Dia Additive 2 Pipe	143	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
5	DETAILED TAKEOFF!35	1" Dia Additive 2 Pipe	617.1	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
6	DETAILED TAKEOFF!38	1" / 3/4" Dia Pipe	1	EA	Yes	CU fitting price not published
7	DETAILED TAKEOFF!39	1" / 3/4" Dia Pipe	1	EA	Yes	CU fitting price not published
8	DETAILED TAKEOFF!43	3/4" Dia Additive 3 Pipe	14.89	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
9	DETAILED TAKEOFF!44	1" Dia Additive 3 Pipe	85.8	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
10	DETAILED TAKEOFF!48	1" Dia Additive 4 Pipe	59.29	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
11	DETAILED TAKEOFF!51	1" Dia Pipe 90 Deg	3	EA	Yes	CU fitting price not published
12	DETAILED TAKEOFF!55	3/4" Dia Additive 4 Pipe	14.71	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
13	DETAILED TAKEOFF!56	1" Dia Additive 4 Pipe	67.74	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
14	DETAILED TAKEOFF!57	4" Dia Additive 4 Pipe	59.31	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
15	DETAILED TAKEOFF!60	4" Dia Pipe 90 Deg	2	EA	Yes	CU fitting price not published
16	DETAILED TAKEOFF!64	1" Dia Additive 5 Pipe	544.02	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
17	DETAILED TAKEOFF!67	1" Dia Pipe 90 Deg	1	EA	Yes	CU fitting price not published
18	DETAILED TAKEOFF!68	1" Dia Pipe Tee	1	EA	Yes	CU fitting price not published
19	DETAILED TAKEOFF!69	1" / 3/4" Dia Pipe	1	EA	Yes	CU fitting price not published
20	DETAILED TAKEOFF!70	2" / 1" Dia Pipe Tee	2	EA	Yes	CU fitting price not published
21	DETAILED TAKEOFF!71	1" / 3/4" Dia Pipe	1	EA	Yes	CU fitting price not published

22	DETAILED TAKEOFF!75	3/4" Dia Additive 6 Pipe	204.6	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
23	DETAILED TAKEOFF!76	1" Dia Additive 6 Pipe	198.84	LF	Yes	SSDW process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
24	DETAILED TAKEOFF!79	1/2" Dia Pipe 90 Deg	2	EA	Yes	CU fitting price not published
25	DETAILED TAKEOFF!80	3/4" Dia Pipe 90 Deg	1	EA	Yes	CU fitting price not published
26	DETAILED TAKEOFF!81	1" Dia Pipe 90 Deg	1	EA	Yes	CU fitting price not published
27	DETAILED TAKEOFF!82	1" Dia Pipe Tee	1	EA	Yes	CU fitting price not published
28	DETAILED TAKEOFF!83	1" Dia Pipe Tee	1	EA	Yes	CU fitting price not published
29	DETAILED TAKEOFF!87	1/2" Dia Trimethylaluminum	330	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
30	DETAILED TAKEOFF!88	1" Dia Trimethylaluminum	18.11	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
31	DETAILED TAKEOFF!89	4" Dia Trimethylaluminum	17.18	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
32	DETAILED TAKEOFF!92	1/2" Dia Pipe 90 Deg	7	EA	Yes	SS fitting price not published
33	DETAILED TAKEOFF!93	1" Dia Pipe 90 Deg	1	EA	Yes	SS fitting price not published
34	DETAILED TAKEOFF!97	1/2" Dia Compressed Dry Air	106.84	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
35	DETAILED TAKEOFF!98	1" Dia Compressed Dry Air Pipe	109.07	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
36	DETAILED TAKEOFF!99	1-1/2" Dia Compressed Dry Air	40.89	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
37	DETAILED TAKEOFF!102	1" Dia Pipe 90 Deg	2	EA	Yes	SS fitting price not published
38	DETAILED TAKEOFF!103	1/2" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
39	DETAILED TAKEOFF!104	1" / 1/2" Dia Pipe	1	EA	Yes	SS fitting price not published
40	DETAILED TAKEOFF!108	3/4" Dia Hydrofluoric Acid Pipe	223.22	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
41	DETAILED TAKEOFF!109	1" Dia Hydrofluoric Acid Pipe	1056	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
42	DETAILED TAKEOFF!110	1-1/4" Dia Hydrofluoric Acid	168.21	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
43	DETAILED TAKEOFF!111	3" Dia Hydrofluoric Acid Pipe	119.72	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
44	DETAILED TAKEOFF!114	3/4" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
45	DETAILED TAKEOFF!115	1" Dia Pipe 90 Deg	2	EA	Yes	PVDF fitting price not published
46	DETAILED TAKEOFF!116	1-1/4" Dia Pipe 90	27	EA	Yes	PVDF fitting price not published
47	DETAILED TAKEOFF!117	3" Dia Pipe 90 Deg	8	EA	Yes	PVDF fitting price not published
48	DETAILED TAKEOFF!118	1" Dia Pipe Tee	2	EA	Yes	PVDF fitting price not published
49	DETAILED TAKEOFF!119	1-1/4" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
50	DETAILED TAKEOFF!120	1-1/4" Dia Pipe Tee	4	EA	Yes	PVDF fitting price not published
51	DETAILED TAKEOFF!121	3" Dia Pipe Tee	3	EA	Yes	PVDF fitting price not published
52	DETAILED TAKEOFF!122	1" / 1/2" Dia Pipe	1	EA	Yes	PVDF fitting price not published
53	DETAILED TAKEOFF!123	1" / 3/4" Dia Pipe	3	EA	Yes	PVDF fitting price not published
54	DETAILED TAKEOFF!124	1-1/4" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
55	DETAILED TAKEOFF!125	1" / 3/4" Dia Pipe	1	EA	Yes	PVDF fitting price not published
56	DETAILED TAKEOFF!126	1-1/4" / 1" Dia Pipe	1	EA	Yes	PVDF fitting price not published
57	DETAILED TAKEOFF!130	3/4" Dia Hydrochloric Acid Pipe	78.03	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
58	DETAILED TAKEOFF!131	1" Dia Hydrochloric Acid Pipe	1045.97	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
59	DETAILED TAKEOFF!134	3/4" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
60	DETAILED TAKEOFF!135	1" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
61	DETAILED TAKEOFF!136	1" Dia Pipe Tee	7	EA	Yes	PVDF fitting price not published
62	DETAILED TAKEOFF!137	1" / 3/4" Dia Pipe	2	EA	Yes	PVDF fitting price not published
63	DETAILED TAKEOFF!138	1" / 3/4" Dia Pipe	1	EA	Yes	PVDF fitting price not published
64	DETAILED TAKEOFF!142	3/4" Dia Sodium Hydroxide Pipe	13.65	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
65	DETAILED TAKEOFF!143	1" Dia Sodium Hydroxide Pipe	52.47	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
66	DETAILED TAKEOFF!146	3/4" Dia Pipe 90 Deg	2	EA	Yes	PVDF fitting price not published
67	DETAILED TAKEOFF!147	1" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
68	DETAILED TAKEOFF!148	1" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
69	DETAILED TAKEOFF!149	1" / 3/4" Dia Pipe	2	EA	Yes	PVDF fitting price not published

70	DETAILED TAKEOFF!153	3/4" Dia Sodium Hydroxide Pipe	110	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
71	DETAILED TAKEOFF!154	1" Dia Sodium Hydroxide Pipe	381.7	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
72	DETAILED TAKEOFF!155	1-1/4" Dia Sodium Hydroxide Pipe	849.2	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
73	DETAILED TAKEOFF!156	3" Dia Sodium Hydroxide Pipe	116.53	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
74	DETAILED TAKEOFF!159	3/4" Dia Sodium Hydroxide Pipe	110	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
75	DETAILED TAKEOFF!160	1" Dia Sodium Hydroxide Pipe	381.7	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
76	DETAILED TAKEOFF!161	1-1/4" Dia Sodium Hydroxide Pipe	849.2	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
77	DETAILED TAKEOFF!162	3" Dia Sodium Hydroxide Pipe	116.53	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
78	DETAILED TAKEOFF!165	3/4" Dia Pipe 90 Deg	5	EA	Yes	PVDF fitting price not published
79	DETAILED TAKEOFF!166	1" Dia Pipe 90 Deg	2	EA	Yes	PVDF fitting price not published
80	DETAILED TAKEOFF!167	1-1/4"Dia Pipe Tee	26	EA	Yes	PVDF fitting price not published
81	DETAILED TAKEOFF!168	3"Dia Pipe Tee 90	14	EA	Yes	PVDF fitting price not published
82	DETAILED TAKEOFF!169	1" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
83	DETAILED TAKEOFF!170	1-1/4"Dia Pipe Tee	4	EA	Yes	PVDF fitting price not published
84	DETAILED TAKEOFF!171	3"Dia Pipe Tee	5	EA	Yes	PVDF fitting price not published
85	DETAILED TAKEOFF!172	1-1/4" / 1" Dia Pipe	2	EA	Yes	PVDF fitting price not published
86	DETAILED TAKEOFF!173	1-1/4" / 3/4" Dia Pipe	3	EA	Yes	PVDF fitting price not published
87	DETAILED TAKEOFF!174	1-1/4" / 3/4" Dia Pipe	1	EA	Yes	PVDF fitting price not published
88	DETAILED TAKEOFF!178	1" Dia Ultrapure Water Return Pipe	255.2	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
89	DETAILED TAKEOFF!179	1-1/2" Dia Ultrapure Water Return Pipe	91.63	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
90	DETAILED TAKEOFF!180	2" Dia Ultrapure Water Return Pipe	167.82	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
91	DETAILED TAKEOFF!181	3" Dia Ultrapure Water Return Pipe	1024.1	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
92	DETAILED TAKEOFF!182	4" Dia Ultrapure Water Return Pipe	986.7	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
93	DETAILED TAKEOFF!185	1" Dia Pipe 90 Deg	8	EA	Yes	PVDF fitting price not published
94	DETAILED TAKEOFF!186	1" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
95	DETAILED TAKEOFF!187	1-1/2" Dia Pipe 90	2	EA	Yes	PVDF fitting price not published
96	DETAILED TAKEOFF!188	3" Dia Pipe 90 Deg	10	EA	Yes	PVDF fitting price not published
97	DETAILED TAKEOFF!189	4" Dia Pipe 90 Deg	3	EA	Yes	PVDF fitting price not published
98	DETAILED TAKEOFF!190	1" Dia Pipe Tee	7	EA	Yes	PVDF fitting price not published
99	DETAILED TAKEOFF!191	1-1/2" Dia Pipe Tee	4	EA	Yes	PVDF fitting price not published
100	DETAILED TAKEOFF!192	3" Dia Pipe Tee	2	EA	Yes	PVDF fitting price not published
101	DETAILED TAKEOFF!193	4" Dia Pipe Tee	3	EA	Yes	PVDF fitting price not published
102	DETAILED TAKEOFF!194	3" / 1" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
103	DETAILED TAKEOFF!195	4" / 3/4" Dia Pipe	1	EA	Yes	PVDF fitting price not published
104	DETAILED TAKEOFF!196	4" / 3" Dia Pipe Tee	3	EA	Yes	PVDF fitting price not published
105	DETAILED TAKEOFF!197	4" / 3" Dia Pipe	1	EA	Yes	PVDF fitting price not published
106	DETAILED TAKEOFF!201	1" Dia Hydrogen Peroxide Pipe	93.5	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
107	DETAILED TAKEOFF!202	3/4" Dia Hydrogen Peroxide Pipe	720.91	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
108	DETAILED TAKEOFF!203	1-1/4"Dia Hydrogen Peroxide Pipe	243.1	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
109	DETAILED TAKEOFF!204	2" Dia Hydrogen Peroxide Pipe	7.52	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
110	DETAILED TAKEOFF!205	3" Dia Hydrogen Peroxide Pipe	118.58	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
111	DETAILED TAKEOFF!208	3/4" Dia Pipe 90 Deg	2	EA	Yes	PVDF fitting price not published
112	DETAILED TAKEOFF!209	1" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
113	DETAILED TAKEOFF!210	1-1/4" Dia Pipe 45	3	EA	Yes	PVDF fitting price not published
114	DETAILED TAKEOFF!211	1-1/4" Dia Pipe 90	36	EA	Yes	PVDF fitting price not published
115	DETAILED TAKEOFF!212	2" Dia Pipe 90 Deg	2	EA	Yes	PVDF fitting price not published

116	DETAILED TAKEOFF!213	3" Dia Pipe 90 Deg	6	EA	Yes	PVDF fitting price not published
117	DETAILED TAKEOFF!214	3/4" Dia Pipe Tee	2	EA	Yes	PVDF fitting price not published
118	DETAILED TAKEOFF!215	1-1/4"Dia Pipe Tee	6	EA	Yes	PVDF fitting price not published
119	DETAILED TAKEOFF!216	1-1/4"Dia Pipe	1	EA	Yes	PVDF fitting price not published
120	DETAILED TAKEOFF!217	2" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
121	DETAILED TAKEOFF!218	3" Dia Pipe Tee	4	EA	Yes	PVDF fitting price not published
122	DETAILED TAKEOFF!219	3" / 2" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
123	DETAILED TAKEOFF!223	1/2" Dia General Nitrogen Pipe	52.8	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
124	DETAILED TAKEOFF!226	1/2" Dia Pipe 90 Deg	3	EA	Yes	SS fitting price not published
125	DETAILED TAKEOFF!227	1/2" Dia Pipe Tee	5	EA	Yes	SS fitting price not published
126	DETAILED TAKEOFF!231	1/2" Dia Trimethylamine	352	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
127	DETAILED TAKEOFF!234	1/2" Dia Pipe 90 Deg	11	EA	Yes	SS fitting price not published
128	DETAILED TAKEOFF!235	1/2" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
129	DETAILED TAKEOFF!240	3" Dia Dilute Acid Pipe	96.59	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
130	DETAILED TAKEOFF!241	4" Dia Dilute Acid Pipe	351.87	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
131	DETAILED TAKEOFF!242	6" Dia Dilute Acid Pipe	345.5	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
132	DETAILED TAKEOFF!244	4" Dia Dilute Acid Pipe (ELECTRIC	311.3	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
133	DETAILED TAKEOFF!247	3" Dia Pipe 45 Deg	2	EA	Yes	CPVC fitting price not published
134	DETAILED TAKEOFF!249	3" Dia Pipe 90 Deg	1	EA	Yes	CPVC fitting price not published
135	DETAILED TAKEOFF!250	4" Dia Pipe 90 Deg	16	EA	Yes	CPVC fitting price not published
136	DETAILED TAKEOFF!251	6" Dia Pipe 90 Deg	4	EA	Yes	CPVC fitting price not published
137	DETAILED TAKEOFF!253	4" Dia Pipe Tee	5	EA	Yes	CPVC fitting price not published
138	DETAILED TAKEOFF!254	6" Dia Pipe Tee	2	EA	Yes	CPVC fitting price not published
139	DETAILED TAKEOFF!255	2" / 1" Dia Pipe Tee	1	EA	Yes	CPVC fitting price not published
140	DETAILED TAKEOFF!256	2" / 1-1/2" Dia Pipe	1	EA	Yes	CPVC fitting price not published
141	DETAILED TAKEOFF!257	2" / 3/4" Dia Pipe	2	EA	Yes	CPVC fitting price not published
142	DETAILED TAKEOFF!261	1/4" Dia Acid Exhaust Pipe	36.25	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
143	DETAILED TAKEOFF!262	2" Dia Acid Exhaust Pipe	123.54	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
144	DETAILED TAKEOFF!263	6" Dia Acid Exhaust Pipe	7.03	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
145	DETAILED TAKEOFF!264	8" Dia Acid Exhaust Pipe	57.63	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
146	DETAILED TAKEOFF!267	1/4" Dia Pipe 90 Deg	1	EA	Yes	PP fitting price not published
147	DETAILED TAKEOFF!268	2" Dia Pipe 90 Deg	7	EA	Yes	PP fitting price not published
148	DETAILED TAKEOFF!269	8" Dia Pipe 90 Deg	7	EA	Yes	PP fitting price not published
149	DETAILED TAKEOFF!270	2" Dia Pipe Tee	1	EA	Yes	PP fitting price not published
150	DETAILED TAKEOFF!271	6" / 3" Dia Pipe Tee	2	EA	Yes	PP fitting price not published
151	DETAILED TAKEOFF!272	8" / 6" Dia Pipe Tee	2	EA	Yes	PP fitting price not published
152	DETAILED TAKEOFF!278	3"Dia Reverse Osmosis Water Pipe	899.8	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
153	DETAILED TAKEOFF!283	3"Dia Reverse Osmosis Water Pipe	899.8	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
154	DETAILED TAKEOFF!288	3" Dia Pipe 90 Deg	1	EA	Yes	CPVC fitting price not published
155	DETAILED TAKEOFF!290	3"Dia Pipe Tee	2	EA	Yes	CPVC fitting price not published
156	DETAILED TAKEOFF!291	1-1/2" / 1/2" Dia Pipe	1	EA	Yes	CPVC fitting price not published
157	DETAILED TAKEOFF!292	1-1/2" / 1" Dia Pipe	3	EA	Yes	CPVC fitting price not published
158	DETAILED TAKEOFF!296	1-1/2" Dia Ultrapure Water Pipe	27.68	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
159	DETAILED TAKEOFF!297	3" Dia Ultrapure Water Pipe	171.39	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
160	DETAILED TAKEOFF!298	4" Dia Ultrapure Water Pipe	990	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
161	DETAILED TAKEOFF!299	6" Dia Ultrapure Water Pipe	93.5	LF	Yes	PVDF process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
162	DETAILED TAKEOFF!300	4" Dia Ultrapure Water Pipe (HEAT	28.6	LF	Yes	Insulation/heat tracing system not priced

163	DETAILED TAKEOFF!301	6" Dia Ultrapure Water Pipe (HEAT	28.6	LF	Yes	Insulation/heat tracing system not priced
164	DETAILED TAKEOFF!304	1-1/2" Dia Pipe 90	2	EA	Yes	PVDF fitting price not published
165	DETAILED TAKEOFF!305	3" Dia Pipe 90 Deg	1	EA	Yes	PVDF fitting price not published
166	DETAILED TAKEOFF!306	4" Dia Pipe 90 Deg	8	EA	Yes	PVDF fitting price not published
167	DETAILED TAKEOFF!307	4" Dia Pipe Tee	3	EA	Yes	PVDF fitting price not published
168	DETAILED TAKEOFF!308	4" Dia Pipe Cross	1	EA	Yes	PVDF fitting price not published
169	DETAILED TAKEOFF!309	3" / 2" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
170	DETAILED TAKEOFF!310	4" / 1" Dia Pipe Tee	2	EA	Yes	PVDF fitting price not published
171	DETAILED TAKEOFF!311	4" / 3" Dia Pipe Tee	5	EA	Yes	PVDF fitting price not published
172	DETAILED TAKEOFF!312	6" / 4" Dia Pipe Tee	1	EA	Yes	PVDF fitting price not published
173	DETAILED TAKEOFF!313	1-1/2" / 1" Dia Pipe	1	EA	Yes	PVDF fitting price not published
174	DETAILED TAKEOFF!317	4" Dia Concentrated Acid WW Pipe	392.7	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
175	DETAILED TAKEOFF!318	6" Dia Concentrated Acid WW Pipe	165.7	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
176	DETAILED TAKEOFF!320	4"x6" Concentrated Acid WW Pipe	588.5	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
177	DETAILED TAKEOFF!323	4"Dia Pipe 45 Deg	2	EA	Yes	PP fitting price not published
178	DETAILED TAKEOFF!324	4" Dia Pipe 90 Deg	15	EA	Yes	PP fitting price not published
179	DETAILED TAKEOFF!325	4"x6" Pipe 90 Deg	12	EA	Yes	PP fitting price not published
180	DETAILED TAKEOFF!326	6" Dia Pipe 90 Deg	2	EA	Yes	PP fitting price not published
181	DETAILED TAKEOFF!327	4" Dia Pipe Tee	2	EA	Yes	PP fitting price not published
182	DETAILED TAKEOFF!328	6" Dia Pipe Tee	1	EA	Yes	PP fitting price not published
183	DETAILED TAKEOFF!329	4"x6" Pipe Tee	2	EA	Yes	PP fitting price not published
184	DETAILED TAKEOFF!333	2" Dia Dilute Alkali WW Pipe	1015.3	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
185	DETAILED TAKEOFF!334	3" Dia Dilute Alkali WW Pipe	1107.7	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
186	DETAILED TAKEOFF!335	4" Dia Dilute Alkali WW Pipe	336.04	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
187	DETAILED TAKEOFF!338	2" Dia Pipe 90 Deg	3	EA	Yes	PP fitting price not published
188	DETAILED TAKEOFF!339	3" Dia Pipe 90 Deg	19	EA	Yes	PP fitting price not published
189	DETAILED TAKEOFF!340	4" Dia Pipe 45 Deg	2	EA	Yes	PP fitting price not published
190	DETAILED TAKEOFF!341	4" Dia Pipe 90 Deg	5	EA	Yes	PP fitting price not published
191	DETAILED TAKEOFF!342	2" Dia Pipe Tee	1	EA	Yes	PP fitting price not published
192	DETAILED TAKEOFF!343	3" Dia Pipe Tee	4	EA	Yes	PP fitting price not published
193	DETAILED TAKEOFF!344	4" Dia Pipe Tee	1	EA	Yes	PP fitting price not published
194	DETAILED TAKEOFF!348	2" Dia Oxygen Pipe	128.9	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
195	DETAILED TAKEOFF!349	2" Dia Oxygen Pipe	439.82	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
196	DETAILED TAKEOFF!352	2" Dia Pipe 90 Deg	7	EA	Yes	SS fitting price not published
197	DETAILED TAKEOFF!367	3" Dia Concentrated Alkaline WW Pipe	164.16	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
198	DETAILED TAKEOFF!368	4"x3"Dia Concentrated	35.21	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
199	DETAILED TAKEOFF!370	4" Dia Concentrated Alkaline WW Pipe	297	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
200	DETAILED TAKEOFF!371	6" Dia Concentrated Alkaline WW Pipe	676.79	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
201	DETAILED TAKEOFF!372	4"x6"Dia Concentrated	609.4	LF	Yes	CPVC process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
202	DETAILED TAKEOFF!375	4" Dia Pipe 45 Deg	2	EA	Yes	CPVC fitting price not published
203	DETAILED TAKEOFF!376	4"x6"Dia Pipe 45	4	EA	Yes	CPVC fitting price not published
204	DETAILED TAKEOFF!377	3" Dia Pipe 90 Deg	2	EA	Yes	CPVC fitting price not published
205	DETAILED TAKEOFF!378	4" Dia Pipe 90 Deg	3	EA	Yes	CPVC fitting price not published
206	DETAILED TAKEOFF!379	6" Dia Pipe 90 Deg	4	EA	Yes	CPVC fitting price not published
207	DETAILED TAKEOFF!380	4"x6"Dia Pipe 90	11	EA	Yes	CPVC fitting price not published
208	DETAILED TAKEOFF!381	4"x6" Pipe 90 Deg	3	EA	Yes	CPVC fitting price not published
209	DETAILED TAKEOFF!382	3" Dia Pipe Tee	1	EA	Yes	CPVC fitting price not published
210	DETAILED TAKEOFF!383	6" Dia Pipe Tee	1	EA	Yes	CPVC fitting price not published
211	DETAILED TAKEOFF!384	4"x6" Pipe Tee	1	EA	Yes	CPVC fitting price not published
212	DETAILED TAKEOFF!385	4"x6"Dia Pipe Tee	1	EA	Yes	CPVC fitting price not published

213	DETAILED TAKEOFF!389	3" Dia General Exhaust Pipe	42.9	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
214	DETAILED TAKEOFF!391	3" Dia General Exhaust Pipe	6.6	LF	Yes	PP process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
215	DETAILED TAKEOFF!394	3" Dia Pipe 90 Deg	6	EA	Yes	PP fitting price not published
216	DETAILED TAKEOFF!398	2" Dia Ammonia Waste Water Pipe	222.2	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
217	DETAILED TAKEOFF!399	3" Dia Ammonia Waste Water Pipe	71.67	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
218	DETAILED TAKEOFF!402	2" Dia Ammonia Waste Water Pipe	222.2	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
219	DETAILED TAKEOFF!403	3" Dia Ammonia Waste Water Pipe	71.67	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
220	DETAILED TAKEOFF!408	1" Dia High Purity Nitrogen Pipe	9.06	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
221	DETAILED TAKEOFF!412	1/2" Dia High Purity Nitrogen Pipe	880	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
222	DETAILED TAKEOFF!413	3/4" Dia High Purity Nitrogen Pipe	10.48	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
223	DETAILED TAKEOFF!415	1" Dia High Purity Nitrogen Pipe	1667.6	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
224	DETAILED TAKEOFF!416	2" Dia High Purity Nitrogen Pipe	1651.1	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
225	DETAILED TAKEOFF!419	1/2" Dia Pipe 90 Deg	101	EA	Yes	SS fitting price not published
226	DETAILED TAKEOFF!420	3/4" Dia Pipe 90 Deg	1	EA	Yes	SS fitting price not published
227	DETAILED TAKEOFF!421	1" Dia Pipe 90 Deg	40	EA	Yes	SS fitting price not published
228	DETAILED TAKEOFF!422	2" Dia Pipe 90 Deg	11	EA	Yes	SS fitting price not published
229	DETAILED TAKEOFF!423	1/2" Dia Pipe Tee	55	EA	Yes	SS fitting price not published
230	DETAILED TAKEOFF!424	3/4" Dia Pipe Tee	2	EA	Yes	SS fitting price not published
231	DETAILED TAKEOFF!425	1" Dia Pipe Tee	36	EA	Yes	SS fitting price not published
232	DETAILED TAKEOFF!426	1" Dia Cross Pipe	3	EA	Yes	SS fitting price not published
233	DETAILED TAKEOFF!427	2" Dia Pipe Tee	7	EA	Yes	SS fitting price not published
234	DETAILED TAKEOFF!428	1" / 1/2" Dia Pipe	53	EA	Yes	SS fitting price not published
235	DETAILED TAKEOFF!429	2" / 1/2" Dia Pipe	7	EA	Yes	SS fitting price not published
236	DETAILED TAKEOFF!430	2" / 1" Dia Pipe Tee	3	EA	Yes	SS fitting price not published
237	DETAILED TAKEOFF!431	3" / 2" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
238	DETAILED TAKEOFF!432	1" / 1/2" Dia Pipe	7	EA	Yes	SS fitting price not published
239	DETAILED TAKEOFF!433	1" / 3/4" Dia Pipe	2	EA	Yes	SS fitting price not published
240	DETAILED TAKEOFF!434	2" / 1/2" Dia Pipe	1	EA	Yes	SS fitting price not published
241	DETAILED TAKEOFF!438	1/2" Dia High Purity Oxygen Pipe	58.72	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
242	DETAILED TAKEOFF!439	1" Dia High Purity Oxygen Pipe	386.53	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
243	DETAILED TAKEOFF!440	2" Dia High Purity Oxygen Pipe	415.56	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
244	DETAILED TAKEOFF!443	1/2" Dia Pipe 90 Deg	3	EA	Yes	SS fitting price not published
245	DETAILED TAKEOFF!444	2" Dia Pipe 90 Deg	11	EA	Yes	SS fitting price not published
246	DETAILED TAKEOFF!445	1" / 1/2" Dia Pipe	22	EA	Yes	SS fitting price not published
247	DETAILED TAKEOFF!449	1/2" Dia Ultra High Purity Nitrogen Pipe	306.12	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
248	DETAILED TAKEOFF!452	1/2" Dia Pipe 90 Deg	4	EA	Yes	SS fitting price not published
249	DETAILED TAKEOFF!453	1/2" Dia Pipe Tee	6	EA	Yes	SS fitting price not published
250	DETAILED TAKEOFF!457	1/4" Dia Silane Pipe	92.43	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
251	DETAILED TAKEOFF!458	1/2" Dia Silane Pipe	1004.3	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
252	DETAILED TAKEOFF!461	1/4" Dia Pipe 90 Deg	6	EA	Yes	SS fitting price not published
253	DETAILED TAKEOFF!462	1/2" Dia Pipe 90 Deg	9	EA	Yes	SS fitting price not published
254	DETAILED TAKEOFF!463	1/2" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
255	DETAILED TAKEOFF!467	1/2" Dia Ammonia Exhaust Pipe	95.26	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
256	DETAILED TAKEOFF!468	1" Dia Ammonia Exhaust Pipe	613.7	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
257	DETAILED TAKEOFF!471	1/2" Dia Pipe 90 Deg	2	EA	Yes	SS fitting price not published

258	DETAILED TAKEOFF!472	1" Dia Pipe 90 Deg	3	EA	Yes	SS fitting price not published
259	DETAILED TAKEOFF!473	1" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
260	DETAILED TAKEOFF!474	1" / 1/2" Dia Pipe	2	EA	Yes	SS fitting price not published
261	DETAILED TAKEOFF!475	1" / 1/2" Dia Pipe	1	EA	Yes	SS fitting price not published
262	DETAILED TAKEOFF!479	1/2" Dia Nitrous Oxide Pipe	1180.3	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
263	DETAILED TAKEOFF!482	1/2" Dia Pipe 90 Deg	7	EA	Yes	SS fitting price not published
264	DETAILED TAKEOFF!483	1/2" Dia Pipe Tee	3	EA	Yes	SS fitting price not published
265	DETAILED TAKEOFF!487	1/2" Dia Ammonia Pipe	133.81	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
266	DETAILED TAKEOFF!488	3/4" Dia Ammonia Pipe	784.37	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
267	DETAILED TAKEOFF!491	1/2" Dia Ammonia Pipe	133.81	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
268	DETAILED TAKEOFF!492	3/4" Dia Ammonia Pipe	784.37	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
269	DETAILED TAKEOFF!495	1/2" Dia Pipe 90 Deg	5	EA	Yes	SS fitting price not published
270	DETAILED TAKEOFF!496	3/4" Dia Pipe 90 Deg	6	EA	Yes	SS fitting price not published
271	DETAILED TAKEOFF!497	3/4" Dia Pipe Tee	1	EA	Yes	SS fitting price not published
272	DETAILED TAKEOFF!498	1/2" / 1/2" Dia Pipe	1	EA	Yes	SS fitting price not published
273	DETAILED TAKEOFF!499	3/4" / 1/2" Dia Pipe	2	EA	Yes	SS fitting price not published
274	DETAILED TAKEOFF!500	2" / 3/4" Dia Pipe	1	EA	Yes	SS fitting price not published
275	DETAILED TAKEOFF!504	1/4" Dia Boron Trichloride Pipe	89.1	LF	Yes	SS process pipe/tubing price not published (PVDF, PP, 316L EP and double-wall systems are quote-only)
276	DETAILED TAKEOFF!507	1/4" Dia Pipe 90 Deg	4	EA	Yes	SS fitting price not published
277	DETAILED TAKEOFF!511	1/2" Dia Angle Valve	1	EA	Yes	Process valve (material/class not specified) not priced
278	DETAILED TAKEOFF!512	1/2" Dia PSV Valve	6	EA	Yes	Process valve (material/class not specified) not priced
279	DETAILED TAKEOFF!513	1/2" Dia Angle Valve	2	EA	Yes	Process valve (material/class not specified) not priced
280	DETAILED TAKEOFF!514	1/2" Dia Ball Valve	76	EA	Yes	Process valve (material/class not specified) not priced
281	DETAILED TAKEOFF!515	1/2" Dia Gate Valve	1	EA	Yes	Process valve (material/class not specified) not priced
282	DETAILED TAKEOFF!516	3/4" Dia Ball Valve	4	EA	Yes	Process valve (material/class not specified) not priced
283	DETAILED TAKEOFF!517	1" Dia Ball Valve	18	EA	Yes	Process valve (material/class not specified) not priced
284	DETAILED TAKEOFF!518	1" Dia Ball Valve	5	EA	Yes	Process valve (material/class not specified) not priced
285	DETAILED TAKEOFF!519	1" Dia Valve	1	EA	Yes	Process valve (material/class not specified) not priced
286	DETAILED TAKEOFF!520	1-1/4" Dia Angle	3	EA	Yes	Process valve (material/class not specified) not priced
287	DETAILED TAKEOFF!521	1-1/4" Dia Ball Valve	26	EA	Yes	Process valve (material/class not specified) not priced
288	DETAILED TAKEOFF!522	1-1/4" Dia PSV	6	EA	Yes	Process valve (material/class not specified) not priced
289	DETAILED TAKEOFF!523	2" Dia PVRV 3 Way	2	EA	Yes	Process valve (material/class not specified) not priced
290	DETAILED TAKEOFF!524	3" Dia Ball Valve	14	EA	Yes	Process valve (material/class not specified) not priced
291	DETAILED TAKEOFF!525	3" Dia PVRV 3 Way	2	EA	Yes	Process valve (material/class not specified) not priced
292	DETAILED TAKEOFF!526	3" Dia PVRV Valve	2	EA	Yes	Process valve (material/class not specified) not priced
293	DETAILED TAKEOFF!527	1" Dia TP Ball Valve	1	EA	Yes	Process valve (material/class not specified) not priced
294	DETAILED TAKEOFF!528	1/2" Dia TP Ball	20	EA	Yes	Process valve (material/class not specified) not priced
295	DETAILED TAKEOFF!529	1-1/2" Dia TP Ball	2	EA	Yes	Process valve (material/class not specified) not priced
296	DETAILED TAKEOFF!530	2" Dia TP Ball Valve	1	EA	Yes	Process valve (material/class not specified) not priced
297	DETAILED TAKEOFF!531	3/4" Dia TP Ball	5	EA	Yes	Process valve (material/class not specified) not priced
298	DETAILED TAKEOFF!532	4" Dia TP Gate	1	EA	Yes	Process valve (material/class not specified) not priced
299	DETAILED TAKEOFF!541	3" Clevis Hanger	296	EA	Yes	Clevis size not priced
300	DETAILED TAKEOFF!542	4" Clevis Hanger	286	EA	Yes	Clevis size not priced
301	DETAILED TAKEOFF!543	6" Clevis Hanger	218	EA	Yes	Clevis size not priced
302	DETAILED TAKEOFF!544	8" Clevis Hanger	4	EA	Yes	Clevis size not priced
303	DETAILED TAKEOFF!545	3/8" Threaded Rods	1062	EA	No	Rod length not stated
304	DETAILED TAKEOFF!546	1/2" Threaded Rods	90	EA	No	Rod length not stated
305	DETAILED TAKEOFF!547	5/8" Threaded Rods	152	EA	No	Rod length not stated
306	DETAILED TAKEOFF!548	3/4" Threaded Rods	2	EA	No	Rod length not stated
307	DETAILED TAKEOFF!551	Trenching And Backfilling For Below	399.3	CY	Yes	Not matched

8. ALLOWANCES

#	Item	Qty / unit	Allowance $	Basis	Included	Excluded	Why exact pricing cannot be set

9. TAKEOFF DISCREPANCIES (PRICED AS RECEIVED)

#	Issue	Takeoff	Expected /	Reference	Priced as	Exposure	Detail
1	Header rows shifted on PROPOSAL SUMMARY	C2 project, C3	Standard layout C3-	Template	Not changed	None	

10. MISSING / ADDITIONAL SCOPE

#	Scope item	Reference	Carried?	Carried $	Exposure range	Notes
1	PVDF / PP / SS EP / double-wall pipe, fittings and valves (NEED QUOTATION)	Section 7	Labor only	$0	specialty supplier quote required	Largest cost
2	Orbital welding equipment, purge gas, weld inspection/borescope, passivation, testing	Practice	No	$0	not quantified	
3	Electric heat tracing and insulation systems	Lines	Labor only	$0	quote required	
4	Electrical gear, scheduled fixtures, special devices (NEED QUOTATION lines)	Section 7	Labor only	$0	quotes required	Largest open cost
5	Pull boxes, straps, supports, fittings beyond couplings/connectors, wire connectors, labels	Practice	No	$0	2% to 4% of material	

11. KEY ASSUMPTIONS

- Material at published distributor web prices; no trade discount.
- Normal working hours.
- Labor production rates are FEDES estimator judgment (section 18).

12. EXCLUSIONS

- Items on NEED QUOTATION lines until quotes are added.
- Overtime / shift work.
- Utility company charges.

13. DOLLAR EXPOSURE / RISK ITEMS

#	Risk	Reason	Carried	Low impact	High impact	Rating	Notes
1	Specialty piping material not priced	Quote-only products	labor only	$0	$0	CRITICAL	
2	Pipefitting workers comp not included	Not found	0%	$0	$0	HIGH	
3	Labor productivity for high-purity work	Judgment	section 18	$0	$0	HIGH	Cleanroom protocols can double labor

14. TAKEOFF-TO-ESTIMATE RECONCILIATION

#	Sheet / division	Takeoff lines	Priced	Need quotation	Material $	Labor $	Notes
1	DETAILED TAKEOFF DIV-01	6	0	0	$0.00	$0.00	
2	DETAILED TAKEOFF DIV-40	328	324	307	$79,749.43	$479,742.89	

Every takeoff line is carried at its takeoff quantity, unit and division. No quantity, unit, description or formula was changed. Div-01 template quantities were entered only where a cost is carried (section 6).

15. MATHEMATICAL QA AND TEMPLATE FORMULA ISSUES

Independent calculation: every line recomputed in Python as qty x (1 + waste) x unit rate, then the template's own summary formulas evaluated against those independent line values. Result 723,708.23. Workbook after full LibreOffice recalculation: see section 1 variance column (live).

#	Issue (formula not modified)	Cells	Dollar impact now	Detail

16. DEVIL'S ADVOCATE REVIEW

#	Area	Challenge and
1	Materials	Published web prices without trade discount. A real supplier quote will move material +/- 15%.
2	Labor	Unit hours are judgment; a published-manual estimate may differ by +/- 20%.

17. EXTERNAL SOURCES (all accessed 2026-10-08 unless noted)

Ref	Source	Used for	Data / effective	URL
W1	O*NET Local Wages (BLS OEWS 2025), Texas	Wages	2025	https://www.onetonline.org/link/localwages/47-2152.00?st=TX
S1	O*NET (pilot research)	Wages	2025	
T2	Texas Comptroller	Sales tax	current	
P1	Plumbing price file (pilot)	Copper, hangers	2026-10-08	research file plumbing_prices.md
P2	Cooney Brothers listings	CPVC	2026-10-08	research file plumbing_prices_2.md

Hallucination control: a separate reviewer re-opened a 42-item sample of these source pages (prices, wage rates, tax rates, unemployment and WC rates) and confirmed all 42 against the live pages on 2026-10-08.

18. LINE PRICING BASIS (EVERY LINE)

Row	Description	Qty w/ waste	Unit hrs	Unit material	Ext. material	Ext. labor	Basis / source ref / flag
DETAI	Permit (.07% of project value) [fee]	1	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	Site development [fee]	1	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	Variance [fee]	1	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	Private inspections [fee]	1	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	Debris haul off [load]	34	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	Site plan [Fee]	1	0	$0.00	$0.00	$0.00	N/A (section 6)
DETAI	3/4" Dia Additive 1 Pipe [LF]	14.7	0.54	NEED QUOTE	$0.00	$270.29	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 1 Pipe [LF]	83.6	0.54	NEED QUOTE	$0.00	$1,537.60	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	2	0.3	NEED QUOTE	$0.00	$20.44	0.30 MH
DETAI	3/4" Dia Additive 2 Pipe [LF]	143	0.54	NEED QUOTE	$0.00	$2,630.11	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 2 Pipe [LF]	617.1	0.54	NEED QUOTE	$0.00	$11,349.95	0.54 MH/LF (SSDW, double wall)
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	1	0.27	NEED QUOTE	$0.00	$9.20	0.27 MH
DETAI	1" / 3/4" Dia Pipe Tee [EA]	1	0.45	NEED QUOTE	$0.00	$15.33	0.45 MH
DETAI	3/4" Dia Additive 3 Pipe [LF]	14.89	0.54	NEED QUOTE	$0.00	$273.94	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 3 Pipe [LF]	85.8	0.54	NEED QUOTE	$0.00	$1,578.07	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 4 Pipe [LF]	59.29	0.54	NEED QUOTE	$0.00	$1,090.49	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	3	0.3	NEED QUOTE	$0.00	$30.65	0.30 MH
DETAI	3/4" Dia Additive 4 Pipe [LF]	14.71	0.54	NEED QUOTE	$0.00	$270.50	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 4 Pipe [LF]	67.74	0.54	NEED QUOTE	$0.00	$1,245.86	0.54 MH/LF (SSDW, double wall)
DETAI	4" Dia Additive 4 Pipe [LF]	59.31	0.783	NEED QUOTE	$0.00	$1,581.79	0.78 MH/LF (SSDW, double wall)
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	2	0.48	NEED QUOTE	$0.00	$32.70	0.48 MH
DETAI	1" Dia Additive 5 Pipe [LF]	544.02	0.54	NEED QUOTE	$0.00	$10,005.76	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.3	NEED QUOTE	$0.00	$10.22	0.30 MH
DETAI	1" Dia Pipe Tee [EA]	1	0.45	NEED QUOTE	$0.00	$15.33	0.45 MH
DETAI	1" / 3/4" Dia Pipe Tee [EA]	1	0.45	NEED QUOTE	$0.00	$15.33	0.45 MH
DETAI	2" / 1" Dia Pipe Tee [EA]	2	0.54	NEED QUOTE	$0.00	$36.78	0.54 MH
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	1	0.27	NEED QUOTE	$0.00	$9.20	0.27 MH
DETAI	3/4" Dia Additive 6 Pipe [LF]	204.6	0.54	NEED QUOTE	$0.00	$3,763.09	0.54 MH/LF (SSDW, double wall)
DETAI	1" Dia Additive 6 Pipe [LF]	198.84	0.54	NEED QUOTE	$0.00	$3,657.07	0.54 MH/LF (SSDW, double wall)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	2	0.3	NEED QUOTE	$0.00	$20.44	0.30 MH
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	1	0.3	NEED QUOTE	$0.00	$10.22	0.30 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.3	NEED QUOTE	$0.00	$10.22	0.30 MH
DETAI	1" Dia Pipe Tee [EA]	1	0.45	NEED QUOTE	$0.00	$15.33	0.45 MH
DETAI	1" Dia Pipe Tee [EA]	1	0.45	NEED QUOTE	$0.00	$15.33	0.45 MH
DETAI LED	1/2" Dia Trimethylaluminum Exhaust Pipe [LF]	330	0.3	NEED QUOTE	$0.00	$3,371.94	0.30 MH/LF (SS)
DETAI	1" Dia Trimethylaluminum Exhaust Pipe [LF]	18.11	0.3	NEED QUOTE	$0.00	$185.01	0.30 MH/LF (SS)
DETAI	4" Dia Trimethylaluminum Exhaust Pipe [LF]	17.18	0.435	NEED QUOTE	$0.00	$254.57	0.43 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	7	0.8	NEED QUOTE	$0.00	$190.74	0.80 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.8	NEED QUOTE	$0.00	$27.25	0.80 MH
DETAI	1/2" Dia Compressed Dry Air Pipe [LF]	106.84	0.3	NEED QUOTE	$0.00	$1,091.72	0.30 MH/LF (SS)
DETAI	1" Dia Compressed Dry Air Pipe [LF]	109.07	0.3	NEED QUOTE	$0.00	$1,114.43	0.30 MH/LF (SS)
DETAI	1-1/2" Dia Compressed Dry Air Pipe [LF]	40.89	0.322	NEED QUOTE	$0.00	$448.42	0.32 MH/LF (SS)
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	2	0.8	NEED QUOTE	$0.00	$54.50	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	1" / 1/2" Dia Pipe Reducer [EA]	1	0.72	NEED QUOTE	$0.00	$24.52	0.72 MH
DETAI	3/4" Dia Hydrofluoric Acid Pipe [LF]	223.22	0.22	NEED QUOTE	$0.00	$1,672.65	0.22 MH/LF (PVDF)
DETAI	1" Dia Hydrofluoric Acid Pipe [LF]	1056	0.22	NEED QUOTE	$0.00	$7,912.82	0.22 MH/LF (PVDF)
DETAI	1-1/4" Dia Hydrofluoric Acid Pipe [LF]	168.21	0.228	NEED QUOTE	$0.00	$1,306.28	0.23 MH/LF (PVDF)
DETAI	3" Dia Hydrofluoric Acid Pipe [LF]	119.72	0.286	NEED QUOTE	$0.00	$1,166.25	0.29 MH/LF (PVDF)
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	2	0.6	NEED QUOTE	$0.00	$40.87	0.60 MH
DETAI	1-1/4" Dia Pipe 90 Deg Elbow [EA]	27	0.63	NEED QUOTE	$0.00	$579.36	0.63 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	8	0.84	NEED QUOTE	$0.00	$228.88	0.84 MH
DETAI	1" Dia Pipe Tee [EA]	2	0.9	NEED QUOTE	$0.00	$61.31	0.90 MH
DETAI	1-1/4" Dia Pipe Tee [EA]	1	0.945	NEED QUOTE	$0.00	$32.19	0.95 MH
DETAI	1-1/4" Dia Pipe Tee [EA]	4	0.945	NEED QUOTE	$0.00	$128.75	0.95 MH
DETAI	3" Dia Pipe Tee [EA]	3	1.26	NEED QUOTE	$0.00	$128.75	1.26 MH
DETAI	1" / 1/2" Dia Pipe Tee [EA]	1	0.9	NEED QUOTE	$0.00	$30.65	0.90 MH
DETAI	1" / 3/4" Dia Pipe Tee [EA]	3	0.9	NEED QUOTE	$0.00	$91.96	0.90 MH

DETAI	1-1/4" Dia Pipe Tee [EA]	1	0.945	NEED QUOTE	$0.00	$32.19	0.95 MH
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	1	0.54	NEED QUOTE	$0.00	$18.39	0.54 MH
DETAI	1-1/4" / 1" Dia Pipe Reducer [EA]	1	0.567	NEED QUOTE	$0.00	$19.31	0.57 MH
DETAI	3/4" Dia Hydrochloric Acid Pipe [LF]	78.03	0.396	NEED QUOTE	$0.00	$1,052.50	0.40 MH/LF (PVDF, double wall)
DETAI	1" Dia Hydrochloric Acid Pipe [LF]	1045.97	0.396	NEED QUOTE	$0.00	$14,107.77	0.40 MH/LF (PVDF, double wall)
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1" Dia Pipe Tee [EA]	7	0.9	NEED QUOTE	$0.00	$214.58	0.90 MH
DETAI	1" / 3/4" Dia Pipe Tee [EA]	2	0.9	NEED QUOTE	$0.00	$61.31	0.90 MH
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	1	0.54	NEED QUOTE	$0.00	$18.39	0.54 MH
DETAI	3/4" Dia Sodium Hydroxide Pipe [LF]	13.65	0.396	NEED QUOTE	$0.00	$184.12	0.40 MH/LF (PVDF, double wall)
DETAI	1" Dia Sodium Hydroxide Pipe [LF]	52.47	0.396	NEED QUOTE	$0.00	$707.70	0.40 MH/LF (PVDF, double wall)
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	2	0.6	NEED QUOTE	$0.00	$40.87	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1" Dia Pipe Tee [EA]	1	0.9	NEED QUOTE	$0.00	$30.65	0.90 MH
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	2	0.54	NEED QUOTE	$0.00	$36.78	0.54 MH
DETAI	3/4" Dia Sodium Hydroxide Pipe [LF]	110	0.396	NEED QUOTE	$0.00	$1,483.65	0.40 MH/LF (PVDF, double wall)
DETAI	1" Dia Sodium Hydroxide Pipe [LF]	381.7	0.396	NEED QUOTE	$0.00	$5,148.28	0.40 MH/LF (PVDF, double wall)
DETAI	1-1/4" Dia Sodium Hydroxide Pipe [LF]	849.2	0.411	NEED QUOTE	$0.00	$11,887.66	0.41 MH/LF (PVDF, double wall)
DETAI	3" Dia Sodium Hydroxide Pipe [LF]	116.53	0.515	NEED QUOTE	$0.00	$2,044.11	0.51 MH/LF (PVDF, double wall)
DETAI	3/4" Dia Sodium Hydroxide Pipe [LF]	110	0.22	NEED QUOTE	$0.00	$824.25	0.22 MH/LF (PVDF)
DETAI	1" Dia Sodium Hydroxide Pipe [LF]	381.7	0.22	NEED QUOTE	$0.00	$2,860.15	0.22 MH/LF (PVDF)
DETAI	1-1/4" Dia Sodium Hydroxide Pipe [LF]	849.2	0.228	NEED QUOTE	$0.00	$6,594.62	0.23 MH/LF (PVDF)
DETAI	3" Dia Sodium Hydroxide Pipe [LF]	116.53	0.286	NEED QUOTE	$0.00	$1,135.18	0.29 MH/LF (PVDF)
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	5	0.6	NEED QUOTE	$0.00	$102.18	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	2	0.6	NEED QUOTE	$0.00	$40.87	0.60 MH
DETAI	1-1/4"Dia Pipe Tee 90 Deg Elbow [EA]	26	0.945	NEED QUOTE	$0.00	$836.85	0.95 MH
DETAI	3"Dia Pipe Tee 90 Deg Elbow [EA]	14	1.26	NEED QUOTE	$0.00	$600.82	1.26 MH
DETAI	1" Dia Pipe Tee [EA]	1	0.9	NEED QUOTE	$0.00	$30.65	0.90 MH
DETAI	1-1/4"Dia Pipe Tee [EA]	4	0.945	NEED QUOTE	$0.00	$128.75	0.95 MH
DETAI	3"Dia Pipe Tee [EA]	5	1.26	NEED QUOTE	$0.00	$214.58	1.26 MH
DETAI	1-1/4" / 1" Dia Pipe Tee [EA]	2	0.945	NEED QUOTE	$0.00	$64.37	0.95 MH
DETAI	1-1/4" / 3/4" Dia Pipe Tee [EA]	3	0.945	NEED QUOTE	$0.00	$96.56	0.95 MH
DETAI	1-1/4" / 3/4" Dia Pipe Reducer [EA]	1	0.567	NEED QUOTE	$0.00	$19.31	0.57 MH
DETAI	1" Dia Ultrapure Water Return Pipe [LF]	255.2	0.22	NEED QUOTE	$0.00	$1,912.26	0.22 MH/LF (PVDF)
DETAI	1-1/2" Dia Ultrapure Water Return Pipe [LF]	91.63	0.236	NEED QUOTE	$0.00	$736.54	0.24 MH/LF (PVDF)
DETAI	2" Dia Ultrapure Water Return Pipe [LF]	167.82	0.253	NEED QUOTE	$0.00	$1,446.10	0.25 MH/LF (PVDF)
DETAI	3" Dia Ultrapure Water Return Pipe [LF]	1024.1	0.286	NEED QUOTE	$0.00	$9,975.92	0.29 MH/LF (PVDF)
DETAI	4" Dia Ultrapure Water Return Pipe [LF]	986.7	0.319	NEED QUOTE	$0.00	$10,720.63	0.32 MH/LF (PVDF)
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	8	0.6	NEED QUOTE	$0.00	$163.49	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1-1/2" Dia Pipe 90 Deg Elbow [EA]	2	0.66	NEED QUOTE	$0.00	$44.96	0.66 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	10	0.84	NEED QUOTE	$0.00	$286.10	0.84 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	3	0.96	NEED QUOTE	$0.00	$98.09	0.96 MH
DETAI	1" Dia Pipe Tee [EA]	7	0.9	NEED QUOTE	$0.00	$214.58	0.90 MH
DETAI	1-1/2" Dia Pipe Tee [EA]	4	0.99	NEED QUOTE	$0.00	$134.88	0.99 MH
DETAI	3" Dia Pipe Tee [EA]	2	1.26	NEED QUOTE	$0.00	$85.83	1.26 MH
DETAI	4" Dia Pipe Tee [EA]	3	1.44	NEED QUOTE	$0.00	$147.14	1.44 MH
DETAI	3" / 1" Dia Pipe Tee [EA]	1	1.26	NEED QUOTE	$0.00	$42.92	1.26 MH
DETAI	4" / 3/4" Dia Pipe Tee [EA]	1	1.44	NEED QUOTE	$0.00	$49.05	1.44 MH
DETAI	4" / 3" Dia Pipe Tee [EA]	3	1.44	NEED QUOTE	$0.00	$147.14	1.44 MH
DETAI	4" / 3" Dia Pipe Reducer [EA]	1	0.864	NEED QUOTE	$0.00	$29.43	0.86 MH
DETAI	1" Dia Hydrogen Peroxide Pipe [LF]	93.5	0.396	NEED QUOTE	$0.00	$1,261.11	0.40 MH/LF (PVDF, double wall)
DETAI	3/4" Dia Hydrogen Peroxide Pipe [LF]	720.91	0.396	NEED QUOTE	$0.00	$9,723.42	0.40 MH/LF (PVDF, double wall)
DETAI	1-1/4"Dia Hydrogen Peroxide Pipe [LF]	243.1	0.411	NEED QUOTE	$0.00	$3,403.07	0.41 MH/LF (PVDF, double wall)
DETAI	2" Dia Hydrogen Peroxide Pipe [LF]	7.52	0.455	NEED QUOTE	$0.00	$116.60	0.46 MH/LF (PVDF, double wall)
DETAI	3" Dia Hydrogen Peroxide Pipe [LF]	118.58	0.515	NEED QUOTE	$0.00	$2,080.00	0.51 MH/LF (PVDF, double wall)
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	2	0.6	NEED QUOTE	$0.00	$40.87	0.60 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	1	0.6	NEED QUOTE	$0.00	$20.44	0.60 MH
DETAI	1-1/4" Dia Pipe 45 Deg Elbow [EA]	3	0.63	NEED QUOTE	$0.00	$64.37	0.63 MH
DETAI	1-1/4" Dia Pipe 90 Deg Elbow [EA]	36	0.63	NEED QUOTE	$0.00	$772.48	0.63 MH
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	2	0.72	NEED QUOTE	$0.00	$49.05	0.72 MH

DETAI	3" Dia Pipe 90 Deg Elbow [EA]	6	0.84	NEED QUOTE	$0.00	$171.66	0.84 MH
DETAI	3/4" Dia Pipe Tee [EA]	2	0.9	NEED QUOTE	$0.00	$61.31	0.90 MH
DETAI	1-1/4"Dia Pipe Tee [EA]	6	0.945	NEED QUOTE	$0.00	$193.12	0.95 MH
DETAI	1-1/4"Dia Pipe Cross Tee [EA]	1	0.945	NEED QUOTE	$0.00	$32.19	0.95 MH
DETAI	2" Dia Pipe Tee [EA]	1	1.08	NEED QUOTE	$0.00	$36.78	1.08 MH
DETAI	3" Dia Pipe Tee [EA]	4	1.26	NEED QUOTE	$0.00	$171.66	1.26 MH
DETAI	3" / 2" Dia Pipe Tee [EA]	1	1.26	NEED QUOTE	$0.00	$42.92	1.26 MH
DETAI	1/2" Dia General Nitrogen Pipe [LF]	52.8	0.3	NEED QUOTE	$0.00	$539.51	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	3	0.8	NEED QUOTE	$0.00	$81.74	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	5	1.2	NEED QUOTE	$0.00	$204.36	1.20 MH
DETAI	1/2" Dia Trimethylamine Exhaust Pipe [LF]	352	0.3	NEED QUOTE	$0.00	$3,596.74	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	11	0.8	NEED QUOTE	$0.00	$299.73	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAILED	1-1/2" Dia Dilute Acid Pipe [LF]	13.9	0.129	$10.77	$149.75	$61.09	Sch 80 CPVC 1-1/2 in $10.77/ft (Cooney, list) [P2]; 0.13 MH/LF; tracing/insulation by separate line
DETAI	3" Dia Dilute Acid Pipe [LF]	96.59	0.156	NEED QUOTE	$0.00	$513.22	0.16 MH/LF (CPVC)
DETAI	4" Dia Dilute Acid Pipe [LF]	351.87	0.174	NEED QUOTE	$0.00	$2,085.32	0.17 MH/LF (CPVC)
DETAI	6" Dia Dilute Acid Pipe [LF]	345.5	0.21	NEED QUOTE	$0.00	$2,471.22	0.21 MH/LF (CPVC)
DETAILED	2" Dia Dilute Acid Pipe (ELECTRIC TRACED & INSULATED) [LF]	1684.1	0.138	$14.94	$25,160.45	$7,915.74	Sch 80 CPVC 2 in $14.94/ft (Cooney, list) [P2]; 0.14 MH/LF; tracing/insulation by separate line
DETAILED	4" Dia Dilute Acid Pipe (ELECTRIC TRACED & INSULATED) [LF]	311.3	0.174	NEED QUOTE	$0.00	$1,844.90	0.17 MH/LF (CPVC)
DETAI	3" Dia Pipe 45 Deg Elbow [EA]	2	0.49	NEED QUOTE	$0.00	$33.38	0.49 MH
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	5	0.42	$27.62	$138.10	$71.53	Spears Sch 80 CPVC 90 2 in $27.62 [P2]; 0.42 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	1	0.49	NEED QUOTE	$0.00	$16.69	0.49 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	16	0.56	NEED QUOTE	$0.00	$305.18	0.56 MH
DETAI	6" Dia Pipe 90 Deg Elbow [EA]	4	0.7	NEED QUOTE	$0.00	$95.37	0.70 MH
DETAI	2" Dia Pipe Tee [EA]	2	0.63	$36.79	$73.58	$42.92	Spears Sch 80 CPVC tee 2 in $36.79 [P2]; 0.63 MH
DETAI	4" Dia Pipe Tee [EA]	5	0.84	NEED QUOTE	$0.00	$143.05	0.84 MH
DETAI	6" Dia Pipe Tee [EA]	2	1.05	NEED QUOTE	$0.00	$71.53	1.05 MH
DETAI	2" / 1" Dia Pipe Tee [EA]	1	0.63	NEED QUOTE	$0.00	$21.46	0.63 MH
DETAI	2" / 1-1/2" Dia Pipe Tee [EA]	1	0.63	NEED QUOTE	$0.00	$21.46	0.63 MH
DETAI	2" / 3/4" Dia Pipe Tee [EA]	2	0.63	NEED QUOTE	$0.00	$42.92	0.63 MH
DETAILED	1/4" Dia Acid Exhaust Pipe (STAINLESS STEEL, 316 SS, ANSI CLASS 150) [LF]	36.25	0.18	NEED QUOTE	$0.00	$222.21	0.18 MH/LF (PP)
DETAI	2" Dia Acid Exhaust Pipe [LF]	123.54	0.207	NEED QUOTE	$0.00	$871.02	0.21 MH/LF (PP)
DETAI	6" Dia Acid Exhaust Pipe [LF]	7.03	0.315	NEED QUOTE	$0.00	$75.41	0.32 MH/LF (PP)
DETAI	8" Dia Acid Exhaust Pipe [LF]	57.63	0.369	NEED QUOTE	$0.00	$724.29	0.37 MH/LF (PP)
DETAI	1/4" Dia Pipe 90 Deg Elbow [EA]	1	0.5	NEED QUOTE	$0.00	$17.03	0.50 MH
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	7	0.6	NEED QUOTE	$0.00	$143.05	0.60 MH
DETAI	8" Dia Pipe 90 Deg Elbow [EA]	7	1.2	NEED QUOTE	$0.00	$286.10	1.20 MH
DETAI	2" Dia Pipe Tee [EA]	1	0.9	NEED QUOTE	$0.00	$30.65	0.90 MH
DETAI	6" / 3" Dia Pipe Tee [EA]	2	1.5	NEED QUOTE	$0.00	$102.18	1.50 MH
DETAI	8" / 6" Dia Pipe Tee [EA]	2	1.8	NEED QUOTE	$0.00	$122.62	1.80 MH
DETAILED	3/4"Dia Reverse Osmosis Water Pipe [LF]	7.12	0.12	$4.39	$31.24	$29.09	Sch 80 CPVC 3/4 in $4.39/ft (Cooney, list) [P2]; 0.12 MH/LF; tracing/insulation by separate line
DETAILED	1-1/2"Dia Reverse Osmosis Water Pipe [LF]	755.7	0.129	$10.77	$8,138.89	$3,320.35	Sch 80 CPVC 1-1/2 in $10.77/ft (Cooney, list) [P2]; 0.13 MH/LF; tracing/insulation by separate line
DETAI	3"Dia Reverse Osmosis Water Pipe [LF]	899.8	0.156	NEED QUOTE	$0.00	$4,780.96	0.16 MH/LF (CPVC)
DETAILED	3/4"Dia Reverse Osmosis Water Pipe [LF]	7.12	0.12	$4.39	$31.24	$29.09	Sch 80 CPVC 3/4 in $4.39/ft (Cooney, list) [P2]; 0.12 MH/LF; tracing/insulation by separate line
DETAILED	1-1/2"Dia Reverse Osmosis Water Pipe [LF]	755.7	0.129	$10.77	$8,138.89	$3,320.35	Sch 80 CPVC 1-1/2 in $10.77/ft (Cooney, list) [P2]; 0.13 MH/LF; tracing/insulation by separate line
DETAI	3"Dia Reverse Osmosis Water Pipe [LF]	899.8	0.156	NEED QUOTE	$0.00	$4,780.96	0.16 MH/LF (CPVC)
DETAI	3/4"Dia Pipe 90 Deg Elbow [EA]	2	0.35	$5.98	$11.96	$23.84	Spears Sch 80 CPVC 90 3/4 in $5.98 [P2]; 0.35 MH
DETAI	1-1/2" Dia Pipe 90 Deg Elbow [EA]	1	0.385	$22.87	$22.87	$13.11	Spears Sch 80 CPVC 90 1-1/2 in $22.87 [P2]; 0.39 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	1	0.49	NEED QUOTE	$0.00	$16.69	0.49 MH
DETAI	1-1/2"Dia Pipe Tee [EA]	18	0.578	$33.05	$594.90	$354.36	Spears Sch 80 CPVC tee 1-1/2 in $33.05 [P2]; 0.58 MH
DETAI	3"Dia Pipe Tee [EA]	2	0.735	NEED QUOTE	$0.00	$50.07	0.73 MH
DETAI	1-1/2" / 1/2" Dia Pipe Tee [EA]	1	0.578	NEED QUOTE	$0.00	$19.69	0.58 MH
DETAI	1-1/2" / 1" Dia Pipe Reducer [EA]	3	0.347	NEED QUOTE	$0.00	$35.46	0.35 MH
DETAI	1-1/2" Dia Ultrapure Water Pipe [LF]	27.68	0.236	NEED QUOTE	$0.00	$222.46	0.24 MH/LF (PVDF)
DETAI	3" Dia Ultrapure Water Pipe [LF]	171.39	0.286	NEED QUOTE	$0.00	$1,669.55	0.29 MH/LF (PVDF)

DETAI	4" Dia Ultrapure Water Pipe [LF]	990	0.319	NEED QUOTE	$0.00	$10,756.49	0.32 MH/LF (PVDF)
DETAI	6" Dia Ultrapure Water Pipe [LF]	93.5	0.385	NEED QUOTE	$0.00	$1,226.07	0.39 MH/LF (PVDF)
DETAI LED	4" Dia Ultrapure Water Pipe (HEAT CONSERVATION INSULATION) [LF]	28.6	0.06	NEED QUOTE	$0.00	$58.45	0.06 MH/LF
DETAI LED	6" Dia Ultrapure Water Pipe (HEAT CONSERVATION INSULATION) [LF]	28.6	0.06	NEED QUOTE	$0.00	$58.45	0.06 MH/LF
DETAI	1-1/2" Dia Pipe 90 Deg Elbow [EA]	2	0.66	NEED QUOTE	$0.00	$44.96	0.66 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	1	0.84	NEED QUOTE	$0.00	$28.61	0.84 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	8	0.96	NEED QUOTE	$0.00	$261.58	0.96 MH
DETAI	4" Dia Pipe Tee [EA]	3	1.44	NEED QUOTE	$0.00	$147.14	1.44 MH
DETAI	4" Dia Pipe Cross Tee [EA]	1	1.44	NEED QUOTE	$0.00	$49.05	1.44 MH
DETAI	3" / 2" Dia Pipe Tee [EA]	1	1.26	NEED QUOTE	$0.00	$42.92	1.26 MH
DETAI	4" / 1" Dia Pipe Tee [EA]	2	1.44	NEED QUOTE	$0.00	$98.09	1.44 MH
DETAI	4" / 3" Dia Pipe Tee [EA]	5	1.44	NEED QUOTE	$0.00	$245.23	1.44 MH
DETAI	6" / 4" Dia Pipe Tee [EA]	1	1.8	NEED QUOTE	$0.00	$61.31	1.80 MH
DETAI	1-1/2" / 1" Dia Pipe Reducer [EA]	1	0.594	NEED QUOTE	$0.00	$20.23	0.59 MH
DETAI	4" Dia Concentrated Acid WW Pipe [LF]	392.7	0.261	NEED QUOTE	$0.00	$3,490.97	0.26 MH/LF (PP)
DETAI	6" Dia Concentrated Acid WW Pipe [LF]	165.7	0.315	NEED QUOTE	$0.00	$1,777.82	0.32 MH/LF (PP)
DETAI	4"x6" Concentrated Acid WW Pipe [LF]	588.5	0.47	NEED QUOTE	$0.00	$9,420.83	0.47 MH/LF (PP, double wall)
DETAI	4"Dia Pipe 45 Deg Elbow [EA]	2	0.8	NEED QUOTE	$0.00	$54.50	0.80 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	15	0.8	NEED QUOTE	$0.00	$408.72	0.80 MH
DETAI	4"x6" Pipe 90 Deg Elbow [EA]	12	0.8	NEED QUOTE	$0.00	$326.98	0.80 MH
DETAI	6" Dia Pipe 90 Deg Elbow [EA]	2	1	NEED QUOTE	$0.00	$68.12	1.00 MH
DETAI	4" Dia Pipe Tee [EA]	2	1.2	NEED QUOTE	$0.00	$81.74	1.20 MH
DETAI	6" Dia Pipe Tee [EA]	1	1.5	NEED QUOTE	$0.00	$51.09	1.50 MH
DETAI	4"x6" Pipe Tee [EA]	2	1.2	NEED QUOTE	$0.00	$81.74	1.20 MH
DETAI LED	2" Dia Dilute Alkali WW Pipe (ELECTRIC TRACED & INSULATED) [LF]	1015.3	0.207	NEED QUOTE	$0.00	$7,158.29	0.21 MH/LF (PP)
DETAI LED	3" Dia Dilute Alkali WW Pipe (ELECTRIC TRACED & INSULATED) [LF]	1107.7	0.234	NEED QUOTE	$0.00	$8,828.41	0.23 MH/LF (PP)
DETAI	4" Dia Dilute Alkali WW Pipe [LF]	336.04	0.261	NEED QUOTE	$0.00	$2,987.27	0.26 MH/LF (PP)
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	3	0.6	NEED QUOTE	$0.00	$61.31	0.60 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	19	0.7	NEED QUOTE	$0.00	$453.00	0.70 MH
DETAI	4" Dia Pipe 45 Deg Elbow [EA]	2	0.8	NEED QUOTE	$0.00	$54.50	0.80 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	5	0.8	NEED QUOTE	$0.00	$136.24	0.80 MH
DETAI	2" Dia Pipe Tee [EA]	1	0.9	NEED QUOTE	$0.00	$30.65	0.90 MH
DETAI	3" Dia Pipe Tee [EA]	4	1.05	NEED QUOTE	$0.00	$143.05	1.05 MH
DETAI	4" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	2" Dia Oxygen Pipe [LF]	128.9	0.345	NEED QUOTE	$0.00	$1,514.64	0.34 MH/LF (SS)
DETAI	2" Dia Oxygen Pipe [LF]	439.82	0.345	NEED QUOTE	$0.00	$5,168.24	0.34 MH/LF (SS)
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	7	0.96	NEED QUOTE	$0.00	$228.88	0.96 MH
DETAI LED	2" Dia General Waste Water Pipe [LF]	958.1	0.138	$14.94	$14,314.01	$4,503.34	Sch 80 CPVC 2 in $14.94/ft (Cooney, list) [P2]; 0.14 MH/LF; tracing/insulation by separate line
DETAI LED	2" Dia General Waste Water Pipe [LF]	958.1	0.138	$14.94	$14,314.01	$4,503.34	Sch 80 CPVC 2 in $14.94/ft (Cooney, list) [P2]; 0.14 MH/LF; tracing/insulation by separate line
DETAI	2"Dia Pipe 90 Deg Elbow [EA]	3	0.42	$27.62	$82.86	$42.92	Spears Sch 80 CPVC 90 2 in $27.62 [P2]; 0.42 MH
DETAI	2"Dia Pipe Tee [EA]	3	0.63	$36.79	$110.37	$64.37	Spears Sch 80 CPVC tee 2 in $36.79 [P2]; 0.63 MH
DETAI	3" Dia Concentrated Alkaline WW Pipe [LF]	164.16	0.156	NEED QUOTE	$0.00	$872.26	0.16 MH/LF (CPVC)
DETAI	4"x3"Dia Concentrated Alkaline WW Pipe [LF]	35.21	0.174	NEED QUOTE	$0.00	$208.68	0.17 MH/LF (CPVC)
DETAI	4" Dia Concentrated Alkaline WW Pipe [LF]	297	0.313	NEED QUOTE	$0.00	$3,166.25	0.31 MH/LF (CPVC, double wall)
DETAI	6" Dia Concentrated Alkaline WW Pipe [LF]	676.79	0.378	NEED QUOTE	$0.00	$8,713.40	0.38 MH/LF (CPVC, double wall)
DETAI	4"x6"Dia Concentrated Alkaline WW Pipe [LF]	609.4	0.313	NEED QUOTE	$0.00	$6,496.68	0.31 MH/LF (CPVC, double wall)
DETAI	4" Dia Pipe 45 Deg Elbow [EA]	2	0.56	NEED QUOTE	$0.00	$38.15	0.56 MH
DETAI	4"x6"Dia Pipe 45 Deg Elbow [EA]	4	0.56	NEED QUOTE	$0.00	$76.29	0.56 MH
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	2	0.49	NEED QUOTE	$0.00	$33.38	0.49 MH
DETAI	4" Dia Pipe 90 Deg Elbow [EA]	3	0.56	NEED QUOTE	$0.00	$57.22	0.56 MH
DETAI	6" Dia Pipe 90 Deg Elbow [EA]	4	0.7	NEED QUOTE	$0.00	$95.37	0.70 MH
DETAI	4"x6"Dia Pipe 90 Deg Elbow [EA]	11	0.56	NEED QUOTE	$0.00	$209.81	0.56 MH
DETAI	4"x6" Pipe 90 Deg Elbow [EA]	3	0.56	NEED QUOTE	$0.00	$57.22	0.56 MH
DETAI	3" Dia Pipe Tee [EA]	1	0.735	NEED QUOTE	$0.00	$25.03	0.73 MH
DETAI	6" Dia Pipe Tee [EA]	1	1.05	NEED QUOTE	$0.00	$35.76	1.05 MH
DETAI	4"x6" Pipe Tee [EA]	1	0.84	NEED QUOTE	$0.00	$28.61	0.84 MH
DETAI	4"x6"Dia Pipe Tee [EA]	1	0.84	NEED QUOTE	$0.00	$28.61	0.84 MH

DETAI	3" Dia General Exhaust Pipe [LF]	42.9	0.234	NEED QUOTE	$0.00	$341.91	0.23 MH/LF (PP)
DETAI	3" Dia General Exhaust Pipe [LF]	6.6	0.421	NEED QUOTE	$0.00	$94.64	0.42 MH/LF (PP, double wall)
DETAI	3" Dia Pipe 90 Deg Elbow [EA]	6	0.7	NEED QUOTE	$0.00	$143.05	0.70 MH
DETAI	2" Dia Ammonia Waste Water Pipe [LF]	222.2	0.345	NEED QUOTE	$0.00	$2,611.01	0.34 MH/LF (SS)
DETAI	3" Dia Ammonia Waste Water Pipe [LF]	71.67	0.39	NEED QUOTE	$0.00	$951.95	0.39 MH/LF (SS)
DETAI	2" Dia Ammonia Waste Water Pipe [LF]	222.2	0.345	NEED QUOTE	$0.00	$2,611.01	0.34 MH/LF (SS)
DETAI	3" Dia Ammonia Waste Water Pipe [LF]	71.67	0.39	NEED QUOTE	$0.00	$951.95	0.39 MH/LF (SS)
DETAI	1" Dia High Purity Nitrogen Pipe [LF]	9.06	0.3	NEED QUOTE	$0.00	$92.62	0.30 MH/LF (SS)
DETAI	1/2" Dia High Purity Nitrogen Pipe [LF]	880	0.3	NEED QUOTE	$0.00	$8,991.84	0.30 MH/LF (SS)
DETAI	3/4" Dia High Purity Nitrogen Pipe [LF]	10.48	0.3	NEED QUOTE	$0.00	$107.12	0.30 MH/LF (SS)
DETAI	1" Dia High Purity Nitrogen Pipe [LF]	1667.6	0.3	NEED QUOTE	$0.00	$17,039.54	0.30 MH/LF (SS)
DETAI	2" Dia High Purity Nitrogen Pipe [LF]	1651.1	0.345	NEED QUOTE	$0.00	$19,401.58	0.34 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	101	0.8	NEED QUOTE	$0.00	$2,752.05	0.80 MH
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	1	0.8	NEED QUOTE	$0.00	$27.25	0.80 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	40	0.8	NEED QUOTE	$0.00	$1,089.92	0.80 MH
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	11	0.96	NEED QUOTE	$0.00	$359.67	0.96 MH
DETAI	1/2" Dia Pipe Tee [EA]	55	1.2	NEED QUOTE	$0.00	$2,247.96	1.20 MH
DETAI	3/4" Dia Pipe Tee [EA]	2	1.2	NEED QUOTE	$0.00	$81.74	1.20 MH
DETAI	1" Dia Pipe Tee [EA]	36	1.2	NEED QUOTE	$0.00	$1,471.39	1.20 MH
DETAI	1" Dia Cross Pipe Tee [EA]	3	1.2	NEED QUOTE	$0.00	$122.62	1.20 MH
DETAI	2" Dia Pipe Tee [EA]	7	1.44	NEED QUOTE	$0.00	$343.32	1.44 MH
DETAI	1" / 1/2" Dia Pipe Tee [EA]	53	1.2	NEED QUOTE	$0.00	$2,166.22	1.20 MH
DETAI	2" / 1/2" Dia Pipe Tee [EA]	7	1.44	NEED QUOTE	$0.00	$343.32	1.44 MH
DETAI	2" / 1" Dia Pipe Tee [EA]	3	1.44	NEED QUOTE	$0.00	$147.14	1.44 MH
DETAI	3" / 2" Dia Pipe Tee [EA]	1	1.68	NEED QUOTE	$0.00	$57.22	1.68 MH
DETAI	1" / 1/2" Dia Pipe Reducer [EA]	7	0.72	NEED QUOTE	$0.00	$171.66	0.72 MH
DETAI	1" / 3/4" Dia Pipe Reducer [EA]	2	0.72	NEED QUOTE	$0.00	$49.05	0.72 MH
DETAI	2" / 1/2" Dia Pipe Reducer [EA]	1	0.864	NEED QUOTE	$0.00	$29.43	0.86 MH
DETAI	1/2" Dia High Purity Oxygen Pipe [LF]	58.72	0.3	NEED QUOTE	$0.00	$599.98	0.30 MH/LF (SS)
DETAI	1" Dia High Purity Oxygen Pipe [LF]	386.53	0.3	NEED QUOTE	$0.00	$3,949.55	0.30 MH/LF (SS)
DETAI	2" Dia High Purity Oxygen Pipe [LF]	415.56	0.345	NEED QUOTE	$0.00	$4,883.10	0.34 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	3	0.8	NEED QUOTE	$0.00	$81.74	0.80 MH
DETAI	2" Dia Pipe 90 Deg Elbow [EA]	11	0.96	NEED QUOTE	$0.00	$359.67	0.96 MH
DETAI	1" / 1/2" Dia Pipe Tee [EA]	22	1.2	NEED QUOTE	$0.00	$899.18	1.20 MH
DETAI LED	1/2" Dia Ultra High Purity Nitrogen Pipe [LF]	306.12	0.3	NEED QUOTE	$0.00	$3,127.92	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	4	0.8	NEED QUOTE	$0.00	$108.99	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	6	1.2	NEED QUOTE	$0.00	$245.23	1.20 MH
DETAI	1/4" Dia Silane Pipe [LF]	92.43	0.54	NEED QUOTE	$0.00	$1,700.06	0.54 MH/LF (SS, double wall)
DETAI	1/2" Dia Silane Pipe [LF]	1004.3	0.54	NEED QUOTE	$0.00	$18,471.49	0.54 MH/LF (SS, double wall)
DETAI	1/4" Dia Pipe 90 Deg Elbow [EA]	6	0.8	NEED QUOTE	$0.00	$163.49	0.80 MH
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	9	0.8	NEED QUOTE	$0.00	$245.23	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	1/2" Dia Ammonia Exhaust Pipe [LF]	95.26	0.3	NEED QUOTE	$0.00	$973.37	0.30 MH/LF (SS)
DETAI	1" Dia Ammonia Exhaust Pipe [LF]	613.7	0.3	NEED QUOTE	$0.00	$6,270.80	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	2	0.8	NEED QUOTE	$0.00	$54.50	0.80 MH
DETAI	1" Dia Pipe 90 Deg Elbow [EA]	3	0.8	NEED QUOTE	$0.00	$81.74	0.80 MH
DETAI	1" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	1" / 1/2" Dia Pipe Tee [EA]	2	1.2	NEED QUOTE	$0.00	$81.74	1.20 MH
DETAI	1" / 1/2" Dia Pipe Reducer [EA]	1	0.72	NEED QUOTE	$0.00	$24.52	0.72 MH
DETAI	1/2" Dia Nitrous Oxide Pipe [LF]	1180.3	0.3	NEED QUOTE	$0.00	$12,060.31	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	7	0.8	NEED QUOTE	$0.00	$190.74	0.80 MH
DETAI	1/2" Dia Pipe Tee [EA]	3	1.2	NEED QUOTE	$0.00	$122.62	1.20 MH
DETAI	1/2" Dia Ammonia Pipe [LF]	133.81	0.3	NEED QUOTE	$0.00	$1,367.32	0.30 MH/LF (SS)
DETAI	3/4" Dia Ammonia Pipe [LF]	784.37	0.3	NEED QUOTE	$0.00	$8,014.65	0.30 MH/LF (SS)
DETAI	1/2" Dia Ammonia Pipe [LF]	133.81	0.3	NEED QUOTE	$0.00	$1,367.32	0.30 MH/LF (SS)
DETAI	3/4" Dia Ammonia Pipe [LF]	784.37	0.3	NEED QUOTE	$0.00	$8,014.65	0.30 MH/LF (SS)
DETAI	1/2" Dia Pipe 90 Deg Elbow [EA]	5	0.8	NEED QUOTE	$0.00	$136.24	0.80 MH
DETAI	3/4" Dia Pipe 90 Deg Elbow [EA]	6	0.8	NEED QUOTE	$0.00	$163.49	0.80 MH
DETAI	3/4" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	1/2" / 1/2" Dia Pipe Tee [EA]	1	1.2	NEED QUOTE	$0.00	$40.87	1.20 MH
DETAI	3/4" / 1/2" Dia Pipe Tee [EA]	2	1.2	NEED QUOTE	$0.00	$81.74	1.20 MH

DETAI	2" / 3/4" Dia Pipe Tee [EA]	1	1.44	NEED QUOTE	$0.00	$49.05	1.44 MH
DETAI	1/4" Dia Boron Trichloride Pipe [LF]	89.1	0.3	NEED QUOTE	$0.00	$910.42	0.30 MH/LF (SS)
DETAI	1/4" Dia Pipe 90 Deg Elbow [EA]	4	0.8	NEED QUOTE	$0.00	$108.99	0.80 MH
DETAI	1/2" Dia Angle Valve [EA]	1	0.725	NEED QUOTE	$0.00	$24.69	0.72 MH
DETAI	1/2" Dia PSV Valve [EA]	6	0.725	NEED QUOTE	$0.00	$148.16	0.72 MH
DETAI	1/2" Dia Angle Valve [EA]	2	0.725	NEED QUOTE	$0.00	$49.39	0.72 MH
DETAI	1/2" Dia Ball Valve [EA]	76	0.725	NEED QUOTE	$0.00	$1,876.71	0.72 MH
DETAI	1/2" Dia Gate Valve [EA]	1	0.725	NEED QUOTE	$0.00	$24.69	0.72 MH
DETAI	3/4" Dia Ball Valve [EA]	4	0.787	NEED QUOTE	$0.00	$107.22	0.79 MH
DETAI	1" Dia Ball Valve [EA]	18	0.85	NEED QUOTE	$0.00	$521.12	0.85 MH
DETAI	1" Dia Ball Valve [EA]	5	0.85	NEED QUOTE	$0.00	$144.75	0.85 MH
DETAI	1" Dia Valve [EA]	1	0.85	NEED QUOTE	$0.00	$28.95	0.85 MH
DETAI	1-1/4" Dia Angle Valve [EA]	3	0.912	NEED QUOTE	$0.00	$93.19	0.91 MH
DETAI	1-1/4" Dia Ball Valve [EA]	26	0.912	NEED QUOTE	$0.00	$807.63	0.91 MH
DETAI	1-1/4" Dia PSV Angle Valve [EA]	6	0.912	NEED QUOTE	$0.00	$186.38	0.91 MH
DETAI	2" Dia PVRV 3 Way Valve [EA]	2	1.1	NEED QUOTE	$0.00	$74.93	1.10 MH
DETAI	3" Dia Ball Valve [EA]	14	1.35	NEED QUOTE	$0.00	$643.73	1.35 MH
DETAI	3" Dia PVRV 3 Way Valve [EA]	2	1.35	NEED QUOTE	$0.00	$91.96	1.35 MH
DETAI	3" Dia PVRV Valve [EA]	2	1.35	NEED QUOTE	$0.00	$91.96	1.35 MH
DETAI	1" Dia TP Ball Valve [EA]	1	0.85	NEED QUOTE	$0.00	$28.95	0.85 MH
DETAI	1/2" Dia TP Ball Valve [EA]	20	0.725	NEED QUOTE	$0.00	$493.87	0.72 MH
DETAI	1-1/2" Dia TP Ball Valve [EA]	2	0.975	NEED QUOTE	$0.00	$66.42	0.97 MH
DETAI	2" Dia TP Ball Valve [EA]	1	1.1	NEED QUOTE	$0.00	$37.47	1.10 MH
DETAI	3/4" Dia TP Ball Valve [EA]	5	0.787	NEED QUOTE	$0.00	$134.03	0.79 MH
DETAI	4" Dia TP Gate Valve [EA]	1	1.6	NEED QUOTE	$0.00	$54.50	1.60 MH
DETAI	1/2" Clevis Hanger [EA]	1045	0.3	$1.69	$1,766.05	$10,677.81	Caddy clevis 1/2 in $1.69 [P1]; 0.3 MH
DETAI	3/4" Clevis Hanger [EA]	343	0.3	$2.19	$751.17	$3,504.77	Caddy clevis 3/4 in $2.19 [P1]; 0.3 MH
DETAI	1" Clevis Hanger [EA]	1077	0.3	$2.19	$2,358.63	$11,004.79	Caddy clevis 1 in $2.19 [P1]; 0.3 MH
DETAI	1-1/4" Clevis Hanger [EA]	191	0.3	$2.95	$563.45	$1,951.64	Caddy clevis 1-1/4 in $2.95 [P1]; 0.3 MH
DETAI	1-1/2" Clevis Hanger [EA]	106	0.3	$2.79	$295.74	$1,083.11	Caddy clevis 1-1/2 in $2.79 [P1]; 0.3 MH
DETAI	2" Clevis Hanger [EA]	774	0.3	$3.49	$2,701.26	$7,908.73	Caddy clevis 2 in $3.49 [P1]; 0.3 MH
DETAI	3" Clevis Hanger [EA]	296	0.35	NEED QUOTE	$0.00	$3,528.62	0.35 MH
DETAI	4" Clevis Hanger [EA]	286	0.35	NEED QUOTE	$0.00	$3,409.41	0.35 MH
DETAI	6" Clevis Hanger [EA]	218	0.35	NEED QUOTE	$0.00	$2,598.78	0.35 MH
DETAI	8" Clevis Hanger [EA]	4	0.35	NEED QUOTE	$0.00	$47.68	0.35 MH
DETAI	3/8" Threaded Rods [EA]	1062	0	NEED QUOTE	$0.00	$0.00	Labor in hanger
DETAI	1/2" Threaded Rods [EA]	90	0	NEED QUOTE	$0.00	$0.00	Labor in hanger
DETAI	5/8" Threaded Rods [EA]	152	0	NEED QUOTE	$0.00	$0.00	Labor in hanger
DETAI	3/4" Threaded Rods [EA]	2	0	NEED QUOTE	$0.00	$0.00	Labor in hanger
DETAI LED	Trenching And Backfilling For Below Slab Pipes [CY]	399.3	0.5	NEED QUOTE	$0.00	$6,800.08	Fallback