

**Attachment 3.4.1
Sample Cost Estimating Sheet by CSI Division**

CITY OF SAN DIEGO, WATER DEPARTMENT
ALVARADO WATER TREATMENT PLANT EXPANSION
DRAFT 90% (REV.) FOR FINAL COST ESTIMATE WORKSHEET

Mechanical															
Section	Description	Means Code	Qty.	Units	Unit Cost					Subs Cost	Total Labor Hours	Total Mat Cost	Total Labor Cost	Total Equip Cost	Total Cost
					Hours Per Unit	Mat. Cost	Labor Cost	Equip. Cost	Total Instltd Cost						
15054	CONCRETE PIPE, 54" OVERFLOW, DWG C-25														
	SEE 15015 SCHEDULE														
	54" PCCP, AVE DEPTH = 17.5'D, STA 50+04 TO 55+02	N/A	498	LF	1.75	150.49	52.5	5.4	208.39		871.5	\$ 74,944	\$ 26,145	\$ 2,689	\$ 103,778
	54" PCCP 22.5 DEG ELBOWS	N/A	2	EA	24	3110	720	108	3938		48	\$ 6,220	\$ 1,440	\$ 216	\$ 7,876
	TRENCH EXC. 26' W X 17.5' D x 498' LG / 27 = 8392 CY	022-254-1300	8392	CY	0.05	0	1.5	1.66	3.16		419.6	0	\$ 12,588	\$ 13,931	\$ 26,519
	TRENCH BEDDING, 8.5' W X 8' D X 498' LG / 27 = 125	026-012-0100	125	CY	0.016	15.4	4.8	1.18	21.38		20	\$ 1,925	\$ 600	\$ 148	\$ 2,673
	TRENCH BACKFILL, 8392 - (125 + 293) = 7974 X 1.27	026-254-3040	10128	CY	0.06	0	1.8	1.18	2.98		607.56	0	\$ 18,227	\$ 11,949	\$ 30,176
	COMPACT TRENCH FILL	022-226-7500	10126	CY	0.029	0	0.87	0.22	1.09		293.654	0	\$ 8,810	\$ 2,228	\$ 11,038
															\$ -
15064	18" & 24" PVC, SDR, STORM DRAIN, DWG C-25														\$ -
	SEE 15051 SCHEDULE, INCLUDE 4"														\$ -
															\$ -
	18" X 24" SDR35, SDR42, 9" D X 100' LG	N/A	100	LF	0.25	22.6	7.5	2.1	32.2		25	\$ 2,260	\$ 750	\$ 210	\$ 3,220
	4"D, PVC, 5'D X 67'	N/A	67	LF	0.12	2.83	3.6	0.4	6.83		8.04	\$ 190	\$ 241	\$ 27	\$ 458
	TRENCH EXC. 13' W X 19' D X 100' LG / 27 =	022-254-1300	433	CY	0.05	0	1.5	1.66	3.16		21.65	0	\$ 650	\$ 716	\$ 1,366
	TRENCH EXC. 8' W X 5' D X 67' LG / 27 =	022-254-1300	99	CY	0.05	0	1.5	1.66	3.16		4.95	0	\$ 149	\$ 164	\$ 313
	TRENCH BEDDING, 4' W X 8' D X 100' LG / 27 = 12 CY	026-012-0100	12	CY	0.16	15.4	4.8	1.18	21.38		1.92	\$ 185	\$ 58	\$ 14	\$ 257
	TRENCH BEDDING, 2.5' W X 8' D X 67' LG / 27 = 5 CY	026-012-0100	5	CY	0.16	15.4	4.8	1.18	21.38		0.8	\$ 77	\$ 24	\$ 6	\$ 107
	TRENCH BACKFILL	026-254-3040	621	CY	0.06	0	1.8	1.18	2.98		37.26	0	\$ 1,118	\$ 733	\$ 1,851
	COMPACT TRENCHFILL	022-226-7500	621	CY	0.029	0	0.87	0.22	1.09		18.009	0	\$ 540	\$ 137	\$ 677
	CATCH BASINS, 8' D	027-152-1130	2	EA	15	455	450	101	1008		30	\$ 910	\$ 900	\$ 202	\$ 2,012
															\$ -
15061	48" RW LAKE MURRAY SUCTION, CML&C STEEL, DWG C-25. SEE 15051 SCHEDULE														\$ -
															\$ -
															\$ -
	48" CML&C STEEL ELBOWS	N/A	2	EA	20	2176	600	96	2872		40	\$ 4,352	\$ 1,200	\$ 192	\$ 5,744
	48" DRESSER COUPLINGS WITH HARNESS RODS	N/A	2	EA	15	1152	450	48	1650		30	\$ 2,304	\$ 900	\$ 96	\$ 3,300
	48" CML&C STEEL PIPE, 8' D, STA 1+00 TO 1+18.62	N/A	49	LF	1.5	106.84	45	4.8	158.64		73.5	\$ 5,333	\$ 2,205	\$ 235	\$ 7,773
	TRENCH EXC. 16' D X 8' W X 49' LG / 27 = 232 CY	022-254-1300	232	CY	0.05	0	1.5	1.66	3.16		11.6	0	\$ 348	\$ 385	\$ 733
	TRENCH BEDDING, 8' W X 8' D X 49' LG / 27 = 11.6 CY	026-012-0100	12	CY	0.16	15.4	4.8	1.18	21.38		1.92	\$ 185	\$ 58	\$ 14	\$ 257
	COMPACT TRENCH FILL, INCLUDES B.F., 026-254-3040 +	022-228-7500	278	CY	0.089	0	1.4	0.22	1.62		24.742	0	\$ 389	\$ 61	\$ 450
															\$ -
15061	48" RW LAKE MURRAY DISCHARGE, CML&C STEEL, DWG C-25. SEE 15051 SCHEDULE														\$ -
															\$ -
															\$ -
	48" CML&C STEEL PIPE, 17.5' D STA 0+98 TO 2+16.41	N/A	119	LF	1.5	106.84	45	4.8	158.64		178.5	\$ 12,952	\$ 5,355	\$ 571	\$ 18,878
	48" CML&C STEEL ELBOWS	N/A	2	EA	20	2176	600	96	2872		40	\$ 4,352	\$ 1,200	\$ 192	\$ 5,744
	48" CLM&C STEEL TEE	N/A	1	EA	26	3265	780	96	4141		26	\$ 3,265	\$ 780	\$ 96	\$ 4,141
	48" BLIND FLG. OR BULKHEAD	N/A	1	EA	12	960	360	24	1344		12	\$ 960	\$ 360	\$ 24	\$ 1,344
	48" DRESSER COUPLINGS WITH HARNESS RODS	N/A	2	EA	15	1152	450	48	1650		30	\$ 2,304	\$ 900	\$ 96	\$ 3,300
	TRENCH EXC. 25.5' W X 17.5' D X 119' LG / 27 = 1967 CY	022-254-1300	1967	CY	0.05	0	1.5	1.66	3.16		96.35	0	\$ 2,951	\$ 3,265	\$ 6,216
	TRENCH BEDDING, 8' W X 8' D X 119' LG / 27 = 28 CY	026-012-0100	28	CY	0.16	15.4	4.8	1.18	21.38		4.48	\$ 431	\$ 134	\$ 33	\$ 598
	COMPACT TRENCH FILL, INCLUDES B.F., 026-254-3040 +	022-226-7500	2360	CY	0.089	0	1.4	0.22	1.62		210.04	0	\$ 3,304	\$ 519	\$ 3,823
															\$ -
15064	48" x 24" BLOWOFF FOR LAKE MURRAY, SUCTION DWG C-25. SEE 15051 SCHEDULE, AWWA C905														\$ -
															\$ -