

Preliminary Construction Cost Estimate

Stantec

Project: Los Olivos Septic to Sewer System
 Client: Los Olivos Community Services District
 W.O. No.: 184031368
 Calc'd By: CEP, JL, GA
 File Name: Los_Olivos_30_per_Estimate_v5.xlsx

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 28-Jun-22

WWTP South Side of District

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL COST	RESPONSIBLE LEAD	NOTES
Overhead and Construction Support Services							
1	Mobilization, Demobilization, Road Permits, Bonds, & Insurance	LS	1	\$ 2,000,000	\$ 2,000,000	Stantec	
2	Construction Survey	LS	1	\$ 250,000	\$ 250,000	Stantec	
3	Pothole Existing Utilities	LS	1	\$ 250,000	\$ 250,000	Stantec	Pothole all existing utility crossings
4	Traffic Control	LS	1	\$ 330,000	\$ 330,000	Stantec	Including signed and stamped traffic control plan, assume closed roads
Overhead and Construction Support Services Subtotal:					\$ 2,830,000		
Collection System Construction							
Zone 1							
5	6-inch PVC Sewer Main (<15 ft cover)	LF	5,523	\$ 180	\$ 994,171	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
6	8-inch PVC Sewer Main (<15 ft cover)	LF	942	\$ 240	\$ 226,125	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
7	48-inch Standard Manhole	EA	19	\$ 17,500	\$ 332,500	Stantec	Minimal cobbles, backfill, t-cut 6-inch AC repaving, 5'-10' deep
Zone 1 Collection System Subtotal:					\$ 1,552,795		
Zone 2							
8	6-inch PVC Sewer Main (<15 ft cover)	LF	953	\$ 180	\$ 171,460	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
9	8-inch PVC Sewer Main (<15 ft cover)	LF	453	\$ 240	\$ 108,733	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
10	48-inch Standard Manhole	EA	1	\$ 17,500	\$ 17,500	Stantec	Minimal cobbles, backfill, t-cut 6-inch AC repaving, 5'-10' deep
11	48-inch Drop Manhole	EA	2	\$ 20,000	\$ 40,000	Stantec	Drop piping outside manhole, minimal cobbles, backfill, 6-inch AC repaving
Zone 2 Collection System Subtotal:					\$ 337,694		
Zone 3							
12	6-inch PVC Sewer Main (<15 ft cover)	LF	16,148	\$ 180	\$ 2,906,571	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
13	6-inch PVC Sewer Main (>15 ft cover)	LF	362	\$ 210	\$ 76,080	Stantec	gravity, open cut, cobbles, backfill, t-cut 6-inch AC repaving
14	8-inch PVC Sewer Main (<15 ft cover)	LF	6,784	\$ 240	\$ 1,628,257	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
15	8-inch PVC Sewer Main (>15 ft cover)	LF	351	\$ 280	\$ 98,332	Stantec	gravity, open cut, cobbles, backfill, t-cut 6-inch AC repaving
16	10-inch PVC Sewer Main (<15 ft cover)	LF	885	\$ 300	\$ 265,601	Stantec	gravity, open cut, minimal cobbles, backfill, t-cut 6-inch AC repaving
17	10-inch PVC Sewer Main (>15 ft cover)	LF	606	\$ 350	\$ 212,128	Stantec	Alamo Pintado Road except creek crossing, gravity, open cut, cobbles, backfill, t-cut 6-inch AC repaving
18	48-inch Standard Manhole	EA	71	\$ 17,500	\$ 1,242,500	Stantec	Minimal cobbles, backfill, t-cut 6-inch AC repaving
19	48-inch Drop Manhole	EA	7	\$ 20,000	\$ 140,000	Stantec	Drop piping outside manhole, minimal cobbles, backfill, 6-inch AC repaving
20	Open Cut Creek Crossing (10-inch Sewer)	LF	150	\$ 500	\$ 75,000	Stantec	Alamo Pintado Creek crossing, gravity
21	Lift Station (duplex pumps, 350 gpm each, 25 HP each, 25 deep, 8-ft diameter, site gate, fence, electrical, SCE meter, backup power)	LS	1	\$ 600,000	\$ 600,000	Stantec	Assume location near intersection of Alamo Pintado Rd and Santa Barbara Ave, sized to accommodate smaller pumps for start up flows and larger pumps for build-out PWWF which are included. Pump to WWTP.
22	4-inch PVC Sewer Forcemain (5 ft cover, separate trench)	LF	2,865	\$ 110	\$ 315,150	Stantec	Assume WWTP located on southside of District, 2690 Santa Barbara Ave., 2 ft separation, up Grand Ave.
Zone 3 Collection System Subtotal:					\$ 7,559,619	Stantec	
Collection System Subtotal:					\$ 9,450,108		

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL COST	RESPONSIBLE LEAD	NOTES
Wastewater Treatment Plant Construction							
Treatment Plant Site Work							
23	Site Grading Work	CY	11,776	\$ 15	\$ 176,642	Stantec	5-ft over ex for entire WWTP site within fence
24	Concrete Pad for Equipment outside of Buildings	CY	14	\$ 500	\$ 6,852	Stantec	4,000 psi concrete slab, 1 ft thick, for pump stations and transformer
25	Yard Piping	LS	1	\$ 350,000	\$ 350,000	Stantec	Assumes piping between treatment processes and equipment, 3 ft cover
26	Vehicle/ Truck Automatic Rolling Gate with key pad, 24 ft wide opening	EA	2	\$ 20,000	\$ 40,000	Stantec	Opening to match access road width
27	AC Site Pavement, 6 inch thick	TN	1,260	\$ 125	\$ 157,500	Stantec	24-ft wide access road to allow for semi-truck turning
28	Site Fence, 8 ft high	LF	1,010	\$ 50	\$ 50,500	Stantec	Includes mesh screening
29	Site Lighting	LS	1	\$ 100,000	\$ 100,000	Stantec	Outside site lighting, timer
30	Site Landscaping (8-ft wide)	SF	8,400	\$ 10	\$ 84,000	Stantec	Area around outside site fence, except adjacent to gates
31	Electrical, Controls, and Instrumentation	LS	1	\$ 1,000,000	\$ 1,000,000	Stantec	Assumes amount for SCADA system, electrical conduits, wiring
32	Backup Diesel Generator and Automatic Transfer Switch	LS	1	\$ 250,000	\$ 250,000	Stantec	Assume 1100 kVA, Cloacina system requires 480v, 3 phase, 200 amps, assume 200 amps for other processes, enclosed
33	PG&E Electrical Meter, Transformer, Switch Gear	LS	1	\$ 200,000	\$ 200,000	Stantec	
Wastewater Treatment Plant Site Work Subtotal:					\$ 2,415,494		
Package MBR Treatment							
34	Treatment Process including MBR	LS	1	\$ 1,978,120	\$ 1,978,120	Cloacina	MEMPAC-M130-65, Bar screen, blowers, fine bubble diffusers, MBR, pumps, controls
35	Sound Attenuation	LS	1	\$ 48,981	\$ 48,981	Cloacina	Aeration and membrane blower enclosures
36	Anoxic/ Headworks Covers	LS	1	\$ 15,250	\$ 15,250	Cloacina	Bolted down tank covers with one inspection hatch
37	UV Disinfection System, duplex	LS	1	\$ 246,980	\$ 246,980	Cloacina	Low pressure, skid mounted, 800 W, 80 mj/cm2 dose, 65 % UVT
38	Low Flow Package	LS	1	\$ 66,000	\$ 66,000	Cloacina	low flow interconnect lines, TEBC motors for permeate system for max turn-down, anoxic mixer extensions
39	Effluent Pump Station (assumed 40 ft TDH)	LS	1	\$ 88,465	\$ 88,465	Cloacina	150 gpm, 3-inch discharge size
40	DryPac Sludge Handling System	LS	1	\$ 453,971	\$ 453,971	Cloacina	10'Hx10'Wx30'L drypac treatment train, skid, insecton stairs, aeration blower, header w/ 15 diffusers, progressive cavity pump, polymer system, volute press
41	Zone 1 Equalization and Zone 3 Process	LS	1	\$ 433,935	\$ 433,935	Cloacina	35'Lx10'Wx10'H tank, aeration blower, diffusers, pump, controls
42	Shelf Spare Equipment	LS	1	\$ 54,629	\$ 54,629	Cloacina	Mixer, blowers, pumps,
43	Headworks/Grit System Upgrade	LS	1	\$ 330,279	\$ 330,279	Cloacina	Redundant 2mm perforated micro bar screen with auger, screen tank, automatic grit removal with screw auger, chute extension, spray wash system, mounted above anoxic tank, platform extension
Package MBR Treatment Equipment Subtotal:					\$ 3,716,609		
44	Tax, Shipping, Installation for Package MBR				\$ 2,415,796		Assume 65% for only Cloacina items (contractor markup 10%, taxes 9%, shipping 5%, installation 25%, insurance 3%, overhead 5%, profit 8%)
Package MBR Treatment Installed Subtotal:					\$ 6,132,405		
Advanced Treatment Items							
45	RO Concentrate Holding Tank	EA	2	\$ 75,000	\$ 150,000	Stantec	Assume 15,000-gallon tank, 15 ft diameter, concrete ring wall, piping appurtenance, level control
46	Liquid Sludge Holding Tank (15,000 gallons) with Aeration	EA	2	\$ 75,000	\$ 150,000	Stantec	Size per LOCSD direction, 15 ft diameter, concrete ring wall, piping appurtenance, level control
47	Reverse Osmosis Treatment	LS	1	\$ 750,000	\$ 750,000	Stantec	Installed cost. Assume single pass, double stage, electrical and instrumentation
48	Chemical Storage	LS	1	\$ 50,000	\$ 50,000	Stantec	Assumes hydrogren peroxide, antiscalent, hydrochloric acid, sodium hypochlorite, separate tanks, chemical pumps, secondary containment, chemical piping
Advanced Treatment Subtotal:					\$ 1,100,000		
Wastewater Treatment Plant Partial Subtotal (See District Items Below):					\$ 9,647,898		

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL COST	RESPONSIBLE LEAD	NOTES
Collection and Partial Treatment Construction Subtotal (See District Items Below):					\$ 21,928,006		
49	Construction Contingency (30%)				\$ 6,578,500		
Construction Total					\$ 28,506,506		
50	Construction Management and Inspection	LS	1	\$ 4,276,000	\$ 4,276,000	Stantec	Assume 15% of construction, includes compaction testing
51	Final Design Engineering & Support During Constr.	LS	1	\$ 4,276,000	\$ 4,276,000	Stantec	Assume 15% of construction. For collection system, items not included in Cloacina WWTP scope, and coordination with Cloacina.
Project Subtotal:					\$ 37,058,506		
Costs to be Provided by District							
52	Emergency Outfall	LS	1	\$ 1,000,000.00	\$ 1,000,000	District	
53	Injection Well	EA	2	\$ 1,200,000.00	\$ 2,400,000	District	
54	CEQA/NEPA and Environmental Permitting	LS	1	\$ 120,000.00	\$ 120,000	District	
55	NPDES and DDW Permitting	LS	1	\$ 65,000.00	\$ 65,000	District	
56	Final Engineering of Wells and Emergency Outfall	LS	1	\$ 400,000.00	\$ 400,000	District	
57	Legal and Administration	LS	1	\$ 250,000.00	\$ 250,000	District	
58	Operator Office and Building (20 ft x 45 ft)	LS	1	\$ 150,000.00	\$ 150,000	District	Assume butler building, foundation, electrical, restroom, HVAC
59	Advanced Treatment Building (80 ft x 45 ft)	LS	1	\$ 250,000.00	\$ 250,000	District	Assume butler building, foundation, electric, unfinished, open on two sides, no HVAC
60	Secondary Treatment Building (109 ft x 110 ft)	LS	1	\$ 450,000.00	\$ 450,000	District	Assume butler building, foundation, electric, unfinished, open on two sides, no HVAC
61	Property Acquisition for WWTP	LS	1	\$ 1,500,000.00	\$ 1,500,000	District	Assume \$1M/acre, 1.5 AC for now
62	Property Acquisition for Lift Station	LS	1	\$ 400,000.00	\$ 400,000	District	Assume 30'x50'
63	Property Acquisition for Easements	AC	2.11	\$ 1,000,000.00	\$ 2,110,000	District	Placeholder \$1M/acre
Costs Provided by District Subtotal:					\$ 9,095,000		

Opinion of Probable Project Costs (rounded):

\$ 46,200,000