

# Preliminary Construction Cost Estimate

Stantec

Project: Los Olivos Sewer System  
 Client: Los Olivos Community Services District  
 W.O. No.: 184031368  
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200 E. Carrillo Street, Suite 101  
 Santa Barbara, CA 93101  
 (805) 963-9532  
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WWTP North Side of District

| ITEM  | DESCRIPTION  | UNIT | QUANTITY | UNIT PRICE   | TOTAL COST          | RESPONSIBLE LEAD | NOTES  |
|---|--|------|----------|--------------|---------------------|------------------|--|
| <b>Overhead and Construction Support Services</b>           |  |      |          |              |                     |                  |  |
| 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        | \$ 360,000   | \$ 360,000          | Stantec          | Including signed and stamped traffic control plan, assume closed roads   |
| <b>Overhead and Construction Support Services Subtotal:</b> |  |      |          |              | <b>\$ 2,860,000</b> |                  |  |
| <b>Collection System Construction</b>                       |  |      |          |              |                     |                  |  |
| <b>Zone 1</b>   |  |      |          |              |                     |                  |  |
| 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   |
| <b>Zone 1 Collection System Subtotal:</b>                   |  |      |          |              | <b>\$ 1,552,795</b> |                  |  |
| <b>Zone 2</b>   |  |      |          |              |                     |                  |  |
| 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   |
| <b>Zone 2 Collection System Subtotal:</b>                   |  |      |          |              | <b>\$ 337,694</b>   |                  |  |
| <b>Zone 3</b>   |  |      |          |              |                     |                  |  |
| 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  | 6-inch PVC Sewer Forcemain (5 ft cover)  | LF   | 2,105    | \$ 165       | \$ 347,325          | Stantec          | Assume WWTP at Figueroa Mountain Rd and Acampo Rd, north of Highway 154  |
| 23  | 6-inch PVC Sewer Forcemain (5 ft cover, separate trench)   | LF   | 5,350    | \$ 165       | \$ 882,750          | Stantec          | Assume WWTP located on northside of Highway 154, 4 ft separation, up Grand Ave.  |
| 24  | 6-inch PVC Sewer Forcemain in 15-inch Steel Casing for Caltrans Crossing (5 ft cover)  | LF   | 125      | \$ 240       | \$ 30,000           | Stantec          | Assume WWTP located on northside of Highway 154  |

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|--|--|------|----------|--------------|----------------------|------------------|---|
| Zone 3 Collection System Subtotal:             |  |      |          |              | \$ 8,504,544         |                  |   |
| <b>Collection System Subtotal:</b>             |  |      |          |              | <b>\$ 10,395,033</b> |                  |   |
| <b>Wastewater Treatment Plant Construction</b> |  |      |          |              |                      |                  |   |
| Treatment Plant Site Work                      |  |      |          |              |                      |                  |   |
| 25   | Site Grading Work  | CY   | 11,776   | \$ 15        | \$ 176,642           | Stantec          | 5-ft over ex for entire WWTP site within fence  |
| 26   | 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  |
| 27   | Yard Piping  | LS   | 1        | \$ 350,000   | \$ 350,000           | Stantec          | Assumes piping between treatment processes and equipment, 3 ft cover  |
| 28   | 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  |
| 29   | AC Site Pavement, 6 inch thick   | TN   | 1,260    | \$ 125       | \$ 157,500           | Stantec          | 24-ft wide access road to allow for semi-truck turning  |
| 30   | Site Fence, 8 ft high  | LF   | 1,010    | \$ 50        | \$ 50,500            | Stantec          | Includes mesh screening   |
| 31   | Site Lighting  | LS   | 1        | \$ 100,000   | \$ 100,000           | Stantec          | Outside site lighting, timer  |
| 32   | Site Landscaping (8-ft wide)   | SF   | 8,400    | \$ 10        | \$ 84,000            | Stantec          | Area around outside site fence, except adjacent to gates  |
| 33   | Electrical, Controls, and Instrumentation                              | LS   | 1        | \$ 1,000,000 | \$ 1,000,000         | Stantec          | Assumes amount for SCADA system, electrical conduits, wiring  |
| 34   | 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  |
| 35   | 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                          |  |      |          |              |                      |                  |   |
| 36   | Treatment Process including MBR  | LS   | 1        | \$ 1,978,120 | \$ 1,978,120         | Cloacina         | MEMPAC-M130-85, Bar screen, blowers, fine bubble diffusers, MBR, pumps, controls  |
| 37   | Sound Attenuation  | LS   | 1        | \$ 48,981    | \$ 48,981            | Cloacina         | Aeration and membrane blower enclosures   |
| 38   | Anoxic/ Headworks Covers   | LS   | 1        | \$ 15,250    | \$ 15,250            | Cloacina         | Bolted down tank covers with one inspection hatch   |
| 39   | UV Disinfection System, duplex   | LS   | 1        | \$ 246,980   | \$ 246,980           | Cloacina         | Low pressure, skid mounted, 800 W, 80 mj/cm2 dose, 65 % UVT   |
| 40   | Low Flow   | LS   | 1        | \$ 66,000    | \$ 66,000            | Cloacina         | low flow interconnect lines, TEBC motors for permeate system for max turn-down, anoxic mixer extensions   |
| 41   | Effluent Pump Station (assumed 40 ft TDH)                              | LS   | 1        | \$ 88,465    | \$ 88,465            | Cloacina         | 150 gpm, 3-inch discharge size  |
| 42   | 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                                  |
| 43   | Zone 1 Equalization and Zone 3 Process                                 | LS   | 1        | \$ 433,935   | \$ 433,935           | Cloacina         | 35'Lx10'Wx10'H tank, aeration blower, diffusers, pump, controls   |
| 44   | Shelf Spare Equipment  | LS   | 1        | \$ 54,629    | \$ 54,629            | Cloacina         | Mixer, blowers, pumps,  |
| 45   | 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         |                  |   |
| 46   | Tax, Shipping, Installation for Package MBR                            |      |          |              | \$ 2,415,796         | Stantec          | 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                       |  |      |          |              |                      |                  |   |
| 47   | 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   |
| 48   | Liquid Sludge Holding Tank (15,000 gallons) with Aeration              | EA   | 2        | \$ 75,000    | \$ 150,000           | Stantec          | Size per LOCSO direction, 15 ft diameter, concrete ring wall, piping appurtenance, level control  |
| 49   | Reverse Osmosis Treatment  | LS   | 1        | \$ 750,000   | \$ 750,000           | Stantec          | Installed cost. Assume single pass, double stage, electrical and instrumentation  |
| 50   | 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         |                  |   |

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|----------------------------------|---|------|----------|-----------------|----------------------|------------------|---|
|                                  | <b>Wastewater Treatment Plant Partial Subtotal (See District Items Below):</b>            |      |          |                 | <b>\$ 9,647,898</b>  |                  |   |
|                                  | <b>Collection and Partial Treatment Construction Subtotal (See District Items Below):</b> |      |          |                 | <b>\$ 22,902,931</b> |                  |   |
| 51                               | Construction Contingency (30%)  |      |          |                 | \$ 6,870,879         |                  |   |
|                                  | <b>Construction Total</b>   |      |          |                 | <b>\$ 29,773,810</b> |                  |   |
| 52                               | Construction Management and Inspection  | LS   | 1        | \$ 4,466,100    | \$ 4,466,100         | Stantec          | Assume 15% of construction, includes compaction testing   |
| 53                               | Final Design Engineering & Support During Constr.   | LS   | 1        | \$ 4,466,100    | \$ 4,466,100         | Stantec          | Assume 15% of construction. For collection system, items not included in Cloacina WWTP scope, and coordination with Cloacina. |
|                                  | <b>Project Subtotal:</b>  |      |          |                 | <b>\$ 38,706,010</b> |                  |   |
| Costs to be Provided by District |   |      |          |                 |                      |                  |   |
| 54                               | Emergency Outfall   | LS   | 1        | \$ 1,000,000.00 | \$ 1,000,000         | District         |   |
| 55                               | Injection Well  | EA   | 2        | \$ 1,200,000.00 | \$ 2,400,000         | District         |   |
| 56                               | CEQA/NEPA and Environmental Permitting  | LS   | 1        | \$ 120,000.00   | \$ 120,000           | District         |   |
| 57                               | NPDES and DDW Permitting  | LS   | 1        | \$ 65,000.00    | \$ 65,000            | District         |   |
| 58                               | Final Engineering of Wells and Emergency Outfall  | LS   | 1        | \$ 400,000.00   | \$ 400,000           | District         |   |
| 59                               | Legal and Administration  | LS   | 1        | \$ 250,000.00   | \$ 250,000           | District         |   |
| 60                               | Operator Office and Building (20 ft x 45 ft)  | LS   | 1        | \$ 150,000.00   | \$ 150,000           | District         | Assume butler building, foundation, electrical, restroom, HVAC  |
| 61                               | 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  |
| 62                               | 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  |
| 63                               | Property Acquisition for WWTP   | LS   | 1        | \$ 1,500,000.00 | \$ 1,500,000         | District         | Assume \$1M/acre, 1.5 AC for now  |
| 64                               | Property Acquisition for Lift Station   | LS   | 1        | \$ 400,000.00   | \$ 400,000           | District         | Assume 30'x50'  |
| 65                               | Property Acquisition for Easements  | AC   | 2.11     | \$ 1,000,000.00 | \$ 2,110,000         | District         | Placeholder \$1M/acre   |
|                                  | <b>Costs Provided by District Subtotal:</b>   |      |          |                 | <b>\$ 9,095,000</b>  |                  |   |

**Opinion of Probable Project Costs (rounded):**

**\$ 47,800,000**