

**TABLE 9-1**

**TOWN-WIDE SEWER COST**

COST COMPONENT	UNITS	PRICE	QUANTITY	ITEM COST	TOTAL
<b>GENERAL ITEMS</b>					<b>\$3,000,000</b>
Record Drawings & Construction Photos	ea	\$5,000	84	\$420,000	
Erosion Control	ea	\$10,000	84	\$840,000	
Final Clean Up and Site Restoration	ea	\$5,000	84	\$420,000	
Test Pits	cy	\$55	23,250	\$1,278,750	
Sewer Testing	lf	\$2	720,000	\$1,440,000	
<b>GRAVITY SEWER</b>					<b>\$81,000,000</b>
8" Gravity Sewer, 0 to 12 Feet Deep, Town Road	lf	\$90	286,000	\$25,740,000	
8" Gravity Sewer, 0 to 12 Feet Deep, State Road	lf	\$150	13,000	\$1,950,000	
8" Gravity Sewer, 12+ Feet Deep, Town Road	lf	\$120	156,000	\$18,720,000	
8" Gravity Sewer, 12+ Feet Deep, State Road	lf	\$180	10,000	\$1,800,000	
Dewatering	lf	\$105	49,800	\$5,229,000	
Service Lateral	ea	\$700	5,100	\$3,570,000	
Lateral Fittings	ea	\$300	5,100	\$1,530,000	
4' Manhole	ea	\$4,200	2,250	\$9,450,000	
Connection to Existing System	ea	\$1,250	14	\$17,500	
By-Pass Pumping for Connections	ea	\$4,000	14	\$56,000	
Misc. (chimneys, clean outs)	ea	\$5,000	94	\$470,000	
Upgrade C.H.A.P.S.	ea	\$2,000,000	1	\$2,000,000	
Upgrade Queen Anne P.S.	ea	\$2,000,000	1	\$2,000,000	
Upgrade Stage Harbor P.S.	ea	\$2,000,000	1	\$2,000,000	
Pipe Line Improvements to Existing Collection System	lf	\$150	40,000	\$6,000,000	
<b>FORCE MAIN</b>					<b>\$8,000,000</b>
Force Main, Town Road	lf	\$65	139,000	\$9,035,000	
Force Main, State Road	lf	\$100	15,000	\$1,500,000	
<i>Credit for Sharing Trench</i>	<i>lf</i>	<i>-\$45</i>	<i>100,000</i>	<i>-\$4,500,000</i>	
Air Release / Flushing Manholes	ea	\$6,100	300	\$1,830,000	
<b>LOW PRESSURE SEWER</b>					<b>\$18,000,000</b>
Small Diameter Pressure Main, Town Road	lf	\$45	100,000	\$4,500,000	
Small Diameter Pressure Main, State Road	lf	\$80	1,000	\$80,000	
Air Release / Flushing / End Manholes	ea	\$4,500	149	\$668,382	
Connection to Manhole	ea	\$2,800	41	\$114,800	
Grinder Pump	ea	\$10,500	1,200	\$12,600,000	
<i>Pump, Panel, Lateral Kit (Model # 2010-93)</i>		<i>\$3,000</i>			
<i>Installation of Pump</i>		<i>\$3,000</i>			
<i>Installation of Lateral</i>		<i>\$3,000</i>			
<i>Engineering</i>		<i>\$1,500</i>			
<b>PUMP STATIONS</b>					<b>\$19,000,000</b>
0 - 100 gpm (0.14 mgd)	ea	\$175,000	63	\$11,025,000	
100 - 500 gpm (0.72 mgd)	ea	\$425,000	16	\$6,800,000	
500 - 1000 gpm (1.44 mgd)	ea	\$1,500,000	1	\$1,500,000	
<b>RESTORATION</b>					<b>\$17,000,000</b>
4" Trench Base (T-base)	cy	\$17	57,640	\$979,880	
2" Trench Binder	ton	\$75	58,688	\$4,401,600	
1" Trench Top Course	ton	\$75	29,344	\$2,200,800	
1-1/2" Top Course - Full Width Overlay	ton	\$58	156,240	\$9,061,920	
Misc Paving Items (Paving Cont.)	%	3%	\$16,644,200	\$499,326	
<b>SUBTOTAL</b>					<b>\$140,000,000</b>
GENERAL CONDITIONS	%	5%	\$140,000,000	5%	\$7,000,000
BONDS AND INSURANCE	%	3%	\$140,000,000	3%	\$4,000,000
MOBILIZATION / DEMOBILIZATION	%	5%	\$140,000,000	5%	\$7,000,000
<b>ESTIMATED CONSTRUCTION COST</b>					<b>\$160,000,000</b>
CONTINGENCY	%	25%	\$160,000,000	25%	\$40,000,000
DESIGN	%	10%	\$160,000,000	10%	\$16,000,000
FISCAL, LEGAL, & ENGINEERING	%	15%	\$160,000,000	15%	\$24,000,000
<b>ESTIMATED PROJECT COST (2006)</b>					<b>\$240,000,000</b>
<b>ESTIMATED PROJECT COST (2007)</b>					<b>\$250,000,000</b>

Note:

- Costs are referenced to construction in March 2006 based on Engineering News Record (ENR) index of 7692, **except** final total (May 2007 ENR Index 7942). Costs must be increased by a ratio of the appropriate ENR indices for construction costs in subsequent years.
- Record drawings, erosion control, and final site clean based on lump sum cost of \$15,000 per sewer shed.
- Trench work (gravity, low pressure and force mains) in town roads to include: excavation, backfill, and traffic control. State Roads also include control density fill (CDF).
- Dewatering based on 50% length of all mains over 15 feet deep.
- Gravity service lateral based on \$50 per foot based on approximately 14 feet to property line (on average).
- Lift stations are based on Gormann-Rupp suction pump stations with generator and instrumentation.
- Cost of grinder pumps based on quote from E-1. Large scale purchases may be a reduction in unit cost.
- Low pressure lateral based on \$34 per lf and average distance of 80 feet with \$275 per connection.
- Trench width based on the following:
  - 6 feet for low pressure, force mains, and gravity mains less than 12 feet deep.
  - 12 feet for gravity mains greater than 12 feet deep.
- Full width overlay based on 27 foot wide right of way.
- Misc. paving items to include aprons, saw-cutting, curb repair and other contingencies.
- Estimated Project Cost does not include utility relocation (stormwater drains and other).
- Estimated Project Cost does not include allowance for hazardous waste removal.
- Pump station cost based a basic architectural design. Custom modification to architectural appearance will increase the cost.