

TxDOT Water and Wastewater Utilities Relocation - US59/LP20 (PS&E 3)

Estimated Summary of Engineering Services

Task	Principal	Engineer	Tech	CAD	Admin	GPS Survey	Total Hours	Total Cost
Hourly Cost	\$ 340	\$ 225	\$ 125	\$ 115	\$ 70	\$ 195		
Field Survey (Preliminary & Design Phase)								
Establish Control/Benchmark, Research	8	40		16			64	\$13,560
Topographic Survey						200	200	\$39,000
Process Survey			20				20	\$2,500
Subtotal Hours	8	40	20	16	0	200	284	
Subtotal Cost	\$ 2,720	\$ 9,000	\$ 2,500	\$ 1,840	\$ -	\$ 39,000		\$55,060
Preliminary Engineering Plans (30/60%)								
Meetings (LWUD & TxDOT)	16						16	\$5,440
Collect Existing TxDOT Plans, CAD, Process Data	16	40		24			80	\$17,200
Utility Coordination and Plan Collection	16	8		16			40	\$9,080
Preliminary Water & Sewer Relocation Design	24	100	40	24			188	\$38,420
Plan & Profile Sheets		120	40	80			240	\$41,200
Typical Details & Standards	12	24	20	80			136	\$21,180
Quantities & Estimates	24	40	20				84	\$19,660
Subtotal Hours	108	332	120	224	0	0	784	
Subtotal Cost	\$ 36,720	\$ 74,700	\$ 15,000	\$ 25,760	\$ -	\$ -		\$ 152,180
Design Phase Engineering Plans (60/90%)								
Meetings (LWUD, TxDOT, Consultants)	40						40	\$13,600
Update Existing TxDOT Plans, CAD	8	20		80			108	\$16,420
Incorporation Drainage System Crossings to Plans		20					20	\$4,500
Incorporation Private Utility Crossings to Plans		40		40			80	\$13,600
Design Phase Water & Sewer Relocation Design	16	80	40	80			216	\$37,640
Update Plan & Profile Sheets		80	20	80			180	\$29,700
Alignment Data Sheets & Construction Sequence Plans		40	40	20			100	\$16,300
Special Details (Interconnect, MHs)		80	48	80			208	\$33,200
Draft Technical and Special Specifications	24	80			80		184	\$31,760
Update Quantities & Estimates (Separated)		60	48				108	\$19,500
Subtotal Hours	88	500	196	380	80	0	1244	
Subtotal Cost	\$ 29,920	\$ 112,500	\$ 24,500	\$ 43,700	\$ 5,600	\$ -		\$ 216,220
Final Engineering Plans								
Meetings (LWUD, TxDOT, Consultants)	40						40	\$13,600
Update Existing TxDOT Plans, CAD	8	40		40			88	\$16,320
Update Plan & Profile Sheets		80	24	40			144	\$25,600
Revise Quantities, Estimate & Bid Items	24	60	24	40			148	\$29,260
Prepare and SUA Supplementals and Permits	24	60			8		92	\$22,220
QA/QC Checks	24	60					84	\$21,660
Subtotal Hours	120	300	48	120	8	0	596	
Subtotal Cost	\$ 40,800	\$ 67,500	\$ 6,000	\$ 13,800	\$ 560	\$ -		\$ 128,660
Construction Administration								
Construction Staking & Cut Sheets		40	60			180	280	\$51,600
Shop Drawing Review		40					40	\$9,000
Periodic Site Visits & Engineering Oversight	20	40					60	\$15,800
Pay Requests and Quantities Processing		40					40	\$9,000
As Built Surveys & Plans		24	40	40		40	144	\$22,800
Meetings (LWUD & TxDOT)	40						40	\$13,600
Project Close Out	20	40			24		84	\$17,480
Subtotal Hours	80	224	100	40	24	220	688	
Subtotal Cost	\$ 27,200	\$ 50,400	\$ 12,500	\$ 4,600	\$ 1,680	\$ 42,900		\$ 139,280
Total Hours	404	1396	484	780	112	420	3596	
Total Costs	\$137,360	\$314,100	\$60,500	\$89,700	\$7,840	\$81,900		\$691,400

Direct Expenses

Plan & Specification Reprographics (10 sets) \$0

Project Total

Engineering Fee	\$691,400
Direct Expenses	\$0
Grand Total	\$691,400