

STIGALL ENGINEERING ASSOCIATES, INC.

4117 Hillsboro Pike, Suite 206 • Nashville, Tennessee 37215 • Telephone: 615-460-7515 • Facsimile: 615-460-7517

November 4, 2013

Tim Begley, Director of Engineering
City of Crossville
392 North Main Street
Crossville, TN 38555-4232

Re: City of Crossville/Catoosa Department
TDOT Water & Wastewater Relocation
180008-2221-14; Cumberland County
STP-28(31); PIN 100260.01
SR-28 (US-127) from North of I-40 to Near Legion Road
SEA Project No. 0608

Dear Mr. Begley:

We appreciated meeting with you, Mr. Kevin Oakes and Mr. Jerry Garrison on October 25, 2013 concerning the referenced water and sewer relocation work associated with this second section of the Highway 127 project. It appears to us that the water and sewer relocation work, designed per our meeting, will have a construction cost of slightly over \$3 million which is to be included in the Tennessee Department of Transportation bids for this road section. Also, we estimate approximately \$250,000 for acquisition services for the utilities as insufficient space has been allocated in most areas in the proposed right-of-way for the need of Crossville's utilities. These acquisition costs will be eligible for TDOT reimbursement, as is the engineering. We estimate the water and sewer costs as follows:

Estimated Water Construction Budget:

10-inch water line; 24,500 l.f. @ \$35/l.f.	\$ 857,500
Small diameter water line for services, including crossings; 29,000 l.f. @ \$14/l.f.	\$ 406,000
Fire hydrant assemblies; 35 @ \$4,200/each	\$ 147,000
Reconnect standard customer service assemblies; 120 @ \$1,000/each	\$ 120,000
Reconnect larger meters; 4 @ \$2,000/each	\$ 8,000
Connect to existing water main; 32 @ \$3,500/each	\$ 112,000
Valves; 60 @ \$1,600/each	\$ 96,000
Extra depth for driveway crossings (lump sum)	\$ 35,000
Crossings for existing water line piping; 25 @ \$25,000/each	\$ 625,000
Total Estimated Water Construction Budget	\$ 2,406,500

Estimated Wastewater Construction Budget:

Reconnect existing services including tubing; 10 @ \$1,000/each	\$ 10,000
4-inch force main; 17,000 l.f. @ \$15/l.f.	\$ 255,000
Extra depth for driveway crossings (lump sum)	\$ 8,000
Future 12-inch crossing; 15 @ \$28,000/each	\$ 420,000
Connect to existing force main; 12 @ \$1,500/each	\$ 18,000
Total Estimated Wastewater Construction Budget	\$ 711,000
Total Estimated Construction Budget	\$ 3,117,500

Total Estimated Budget:

Construction	\$ 3,117,500
Settlement to property owners & acquisition firm	\$ 250,000
Total Estimated Budget	\$ 3,367,500

The Rural Development chart for a \$3.11 million value of construction is 6.4871% or \$202,235. As design of these projects is 70% and the remaining 30% bidding and construction administration, this latter 30% can be deducted as this is primarily a TDOT function other than shop drawing review for a "move-in" project. This reduces the allowable fee to \$141,564. Additionally, we offer a 15% deduction in this fee not to exceed \$120,330.

We appreciate the confidence the City has shown us with previous projects. If selected, we will work very diligently to minimize the City's "betterment" costs as we did on the first, northernmost section of the 127 relocation located in Cumberland County.

Sincerely,
STIGALL ENGINEERING ASSOCIATES, INC.



Robert D. Stigall, P.E.
President

RDS/mac