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2602 NORTH STADIUM BLVD.
COLUMBIA, MO 65202

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7/23/2014

Mr. Jerod Kelley
Kansas Department of Transportation
Lawrence Construction Office
1462 US-40 Hwy
Lawrence, KS 66044

**RE: RFC # 025 – Extra Costs for Unsuitable Subgrade 24" Sanitary Material
South Lawrence Trafficway
Job K-8392-04**

Mr. Kelley:

As addressed in a previous RFC and subsequent change order, ESS has encountered an unforeseen condition while installing the 24" sanitary line that was added to the above referenced project by a previous change order. Specifically, there is a perched water condition at or near flow line elevation that combined with the silty clay soils is creating an unstable zone for a depth that extends at least five foot below flow line. We are currently removing 5 – 7 feet of unsuitable material and replacing it with layers of shot rock of varying diameter with the largest rocks being placed in the bottom of the trench and reducing down in size until we cap the stabilization off with SB2. In addition to over excavation and rock stabilization, we are also having to remove significantly more overburden than was previously anticipated due to yielding subgrade will not being able to support multiple stacked trench boxes.

Previously change order #16(RFC #014) was received to cover the stabilization of the trench from stations 20+43 to 45+43 with the agreement being made that any stabilization costs above the previously approved amount or outside of the previously approved station range. After installation was complete within the above referenced station range more investigative trenching was performed and it has been confirmed that stabilization will be required for the remainder of the 24" line as well as the 10" service line (changed from 8" to 10" via change order #20/RFC#021) that is to be installed to the south as shown on the plans. ESS has agreed to maintain the previously established unit price for stabilization as long as the actual volume of stabilization is accurately recorded.

The field conditions and depths and widths of previous stabilization efforts for the previous 2,500 lf were used to create this estimate. The 10" stabilization was calculated with 5' trench box spreaders while the 24" was estimated using 6' spreaders given that this width of stabilization had previously generated suitable results. The estimated stabilization quantities and costs are summarized below. This estimate assumes that the entire length where casing is required can be open excavated to allow the entire 242' length of casing to be installed all at once. Any stabilization efforts exceeding the parameters outlined above would be addressed under an additional request. ESS has made every attempt to investigate the remaining work and apply accurate estimates, it is our intent to be reimbursed for the costs incurred by the unforeseen conditions, it is not our intent to provide lump sum pricing to address any conditions encountered.



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Estimated Stabilization

Description	Station Range	Length (ft)	Stabilized Width (ft)	Stabilized Depth (ft)	Net Stabilized Depth (ft)	Net Stabilization (CY)	Unit Price \$/(CY)	Extension
24" Sanitary	45+00 - 52+31	741	7	6	4.5	864.5	\$72.58	\$62,745.41
10" Sanitary	60+00 - 63+97*	397	6	6	4.5	397	\$72.58	\$28,814.26
Totals		1,138				1,261.50	\$145.16	\$91,559.67

*10" Quantity was reduced by 80 lf due to anticipated bore under 35th Street.

**Manhole subgrade was stabilized as well and is included in the above calculations.

Sincerely,

Tyler Myers
Project Manager