

Appendix 3 to Exhibit C
Basis for Subconsultant Costs
Southeast Regional Lift Station
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**Basis for Survey Subconsultant Costs
Southeast Regional Lift Station**

Aerial Survey Fee	Aerial Surveys	\$62,850.00
	Aerial Control Surveys	\$7,405.00 (Control Points)
Ground Surveys		\$94,272.00

Hourly Rates for additional work beyond scope as defined above:

Hourly Rate for three person survey crew	\$168.02
Hourly Rate for Survey Technician	\$80.60
Hourly Rate for Survey Project Manager	\$91.53

CH Engineering Surveying Personnel Rates:

Survey Party Chief	\$73.77
Survey Instrument Person	\$54.65
Survey Rod Person	\$39.62
Survey Cadd Technician	\$80.60
Survey Project Manager	\$91.53

Item No	Description of Item	Qty.	Unit	Rate	Amount
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A	FIELD INVESTIGATIONS:				
1	Preliminary data reviews and site studies	8	hours	\$ 125.00	\$ 1,000.00
2	Boring location stakeout for 15 borings on up to 3 sites from CAD or site drawings. Does <u>NOT</u> include any coordination with property owners. See Note#1 below.	15	hrs.	\$ 90.00	\$ 1,350.00
3	Utility Coordination with ULOCO	6	hrs.	\$ 75.00	\$ 450.00
4	Mob/Demob per ATV Drill Rigs - between 1 to 3 sites	1	LS	\$ 5,500.00	\$ 5,500.00
5	Skid Steer Loader to support difficult terrain and deep rock coring operation.	21	days	\$ 275.00	\$ 5,775.00
6	Soil test auger boring (SPT) 10 borings in soil overburden (assumed to be 25' each)	250	feet	\$ 17.50	\$ 4,375.00
7	Soil test auger boring (SPT) 5 borings in soil overburden (assumed to be 15' each)	75	feet	\$ 17.50	\$ 1,312.50
8	Moving between the holes, difficult moving, stand by: minimum @ 1 to 2 hours each or more.	18	hours	\$ 250.00	\$ 4,500.00
9	Temporary casing in soil overburden for rock coring setup.	135	LF	\$ 11.00	\$ 1,485.00
10	Rock coring wire line deep borings in 5' runs 1 @135 VF	135	LF	\$ 70.00	\$ 9,450.00
11	Rock coring wire line in 5' runs: 2 @ 60' deep and 3 @ 50' deep.	270	feet	\$ 65.00	\$ 17,550.00
12	Water tank for wireline coring	20	days	\$ 100.00	\$ 2,000.00
13	Grouting the rock core holes with cement slurry up to top of rock cores.	405	VF	\$ 10.00	\$ 4,050.00
14	Supply & install casing for piezometers 75 V.F.each	75	VF	\$ 45.00	\$ 3,375.00
15	Supply & install One well head	1	each	\$ 250.00	\$ 250.00
16	Well development of One piezometer	1	each	\$ 200.00	\$ 200.00
17	Traffic Control signage and cones or drums. No lighted sign or flagmen needed. No pavement borings included.	2	days	\$ 500.00	\$ 1,000.00
18	Collecting bag samples, one per boring for proctor tests	18	each	\$ 35.00	\$ 630.00
19	Selective Limited Clearing of site for rig access, using hand tools.	3	days	\$ 1,200.00	\$ 3,600.00
20	Field Engineer / Geologist to do field coordination, monitor drilling, prepare field logs and record water table	220	hours	\$ 90.00	\$ 19,800.00
21	Support Truck	25	days	\$ 100.00	\$ 2,500.00
22	Per Diem for drilling crew	25	days	\$ 250.00	\$ 6,250.00
23	Contingency items, including Rentals (rental of any equipment will be cost +15%):	1	LS	\$ 9,000.00	\$ 9,000.00
	TOTAL ESTIMATE FOR DRILLING SERVICES: (1- 23)				\$ 104,402.50

