

**Summation of Bids Received
QA/QC Engineering Construction Testing Services Annual
Contract**

IFB 010-44

Fee and Rate Schedule

Line	Item Description	Contour Engineering, LLC	Goodwyn Mills Cawood (GMC)	Geo-Hydro Engineers
		Norcross, GA	Buford, GA	Kennesaw, GA
1.	Basic Engineering Service Rates			
A.	Engineering Services			
1	Project Geologist, per hour	\$110.00	\$85.00	\$100.00
2	Structural Engineer, P. E., per hour	\$150.00	\$145.00	\$160.00
3	Geotechnical Engineer, P. E., per hour	\$150.00	\$115.00	\$160.00
4	Environmental Engineer, P. E., per hour	\$150.00	\$115.00	\$160.00
5	Staff Engineer, per hour	\$95.00	\$70.00	\$100.00
6	Project Engineer / Project Manager, P. E., per hour	\$110.00	\$85.00	\$160.00
7	Senior Engineer / Senior Project Manager, P. E., per hour	\$150.00	\$95.00	\$160.00
8	Senior Engineer / Division Manager, P. E., per hour	\$175.00	\$135.00	\$175.00
9	Chief Engineer / Principal, P. E., per hour	\$225.00	\$145.00	\$200.00
10	CAD Operator / Draftsperson, per hour	\$75.00	\$85.00	\$100.00
B.	Technician Services			
1	Chief Engineering Technician, per hour	\$95.00	\$60.00	\$95.00
2	Metals Technician / Inspector, per hour	\$95.00	\$65.00	\$150.00
3	Concrete Technician / Inspector, per hour	\$65.00	\$50.00	\$80.00
4	Soils Technician / Inspector, per hour	\$65.00	\$55.00	\$80.00
5	Environmental Technician / Inspector, per hour	\$75.00	\$60.00	\$95.00
6	Asphalt Technician / Inspector, per hour	\$85.00	\$60.00	\$80.00
7	Registered Roof Observer (by the Roof Consultants Inst.), per hour	\$100.00	\$75.00	\$100.00
8	Registered Roof Consultant, per hour	\$175.00	\$85.00	\$150.00
9	General Engineering Technician / Inspector, per hour	\$65.00	\$50.00	\$80.00
10	Certified Industrial Hygienist, per hour	\$275.00	\$65.00	\$150.00
C.	Clerical Services			
	Secretarial, per hour	\$65.00	\$35.00	\$60.00
D.	Special Services, Basic Engineering Rates	At Cost	At Cost	At Cost
	Total Line 1	(min. 4 hrs.)		
2.	Soils			
A.	Field Services			
	Field density tests either by drive cylinder, sand cone nuclear gauge, per hour	\$65.00	\$55.00	\$80.00
B.	Laboratory Services			
1	Standard Compaction Test (Method D does not include grain size)			
a.	Method A (4" mold), per test	\$110.00	\$100.00	\$280.00
b.	Method B, C, or D (6" mold), per test	\$110.00	\$100.00	\$280.00
c.	Standard Proctor, per test	\$110.00	\$100.00	\$280.00
2	Modified Compaction Test including rough plots and grain size curves except on base rock. Method D does not include grain size.			
a.	Method A (4" mold), per test	\$125.00	\$125.00	\$350.00
b.	Method B, C, or D (6" mold), per test	\$125.00	\$125.00	\$350.00
c.	Standard Proctor, per test	\$125.00	\$125.00	\$350.00
3	CBR at optimum moisture content, including laboratory compaction test with plot of compaction and CBR curves, each	\$300.00	\$425.00	\$1,000.00
4	CBR, Corps of Engineers Method, each	\$225.00	\$450.00	\$1,000.00
5	Natural moisture content, each	\$25.00	\$10.00	\$20.00
6	Atterberg limits, each	\$100.00	\$85.00	\$120.00
7	Grain size, each	\$100.00	\$85.00	\$120.00
8	Washed 200, each	\$100.00	\$75.00	\$120.00
9	Washed 200 + Hydrometer, each	\$200.00	\$175.00	\$160.00
10	Consolidation Test			
a.	Undisturbed sample, each	\$500.00	\$800.00	\$850.00
b.	Remolded sample, each	\$50.00	\$800.00	\$950.00
11	Triaxial Shear Test			
a.	Pile load testing ASTM (D1153), each	\$2,500.00	\$500.00	\$0.00
b.	Pile Driving monitoring, per LF	\$95.00	\$10.00	\$0.00
c.	UU Test, each	\$500.00	\$300.00	\$330.00
d.	CU Test, each	\$600.00	\$1,000.00	\$2,500.00
e.	CU Test with pore pressure, each	\$900.00	\$1,300.00	\$2,500.00
f.	Add for remold, each	\$50.00	\$125.00	\$100.00
g.	Unconfined compressive strength test, each (to calculate shear strength of soil)	\$500.00	\$225.00	\$240.00
12	Permeability testing (Triaxial apparatus)			
a.	Remolded, each	\$450.00	\$475.00	\$650.00
b.	Undisturbed, each	\$400.00	\$375.00	\$550.00
13	Triaxial compression test, consolidated, undrained, per pt.	\$200.00	\$525.00	\$1,200.00
14	California Bearing Ration (CBR), each pt.	\$225.00	\$135.00	\$350.00
15	Swell Test on CBR, each	\$225.00	\$155.00	\$50.00
16	Sand Equivalent Test GDT63, each	\$100.00	\$250.00	\$250.00
17	Soil resistivity, each	\$100.00	\$50.00	\$300.00
	Total Line 2			
3.	Soil Cement			
A.	Field Services			
	Observation of soil cement field placement, per hour	\$75.00	\$60.00	\$80.00
B.	Laboratory Services			
1	First soil cement mixture (includes calcium absorption test on soil sample)	\$3,500.00	\$350.00	\$3,500.00
2	Each additional cement content using same sample, add	\$1,000.00	\$50.00	\$1,000.00
3	For wetting and drying tests, add for each cement content	\$1,500.00	\$50.00	\$1,250.00
	Total Line 3			

4.	Asphaltic Materials			
A.	Field Services			
1	Observation and field testing of asphaltic concrete placement, per hour	\$75.00	\$60.00	\$80.00
2	Two-man asphaltic concrete coring crew, including trailer and equipment, per hour	\$150.00	\$150.00	\$180.00
		(min. 4 hrs.)		
B.	Laboratory Services-Asphaltic Materials and Tests			
1	Asphaltic Concrete Mix Design			
a.	Marshall method, per design	\$1,500.00	\$200.00	\$0.00
b.	Hubbard-field method, per design, two inch	\$1,500.00	\$225.00	\$0.00
c.	Hubbard-field method, per design, six inch	\$1,500.00	\$300.00	\$0.00
2	Bitumen content only, per test	\$200.00	\$150.00	\$250.00
3	Bitumen and gradation of asphaltic concrete, per test	\$300.00	\$325.00	\$350.00
4	Density, samples F.O.B. laboratory			
a.	Already mixed, per test	\$75.00	\$25.00	\$35.00
b.	Not already mixed, per test	\$125.00	\$175.00	\$60.00
5	Hubbard-field stability, samples F.O.B. laboratory			
a.	Three specimens, two inches	\$500.00	\$175.00	\$0.00
b.	Three specimens, six inches	\$500.00	\$225.00	\$0.00
6	Marshall Method Stability, three specimens	\$500.00	\$250.00	\$300.00
	Total Line 4			
5.	Concrete and Cement			
A.	Field Services			
1	Concrete quality control inspection and testing - per hour	\$65.00	\$50.00	\$80.00
2	Cylinders (3 specimens per set), ASTM C-39, per set	\$45.00	\$24.00	\$60.00
3	Reserve cylinders, each	\$15.00	\$8.00	\$20.00
4	Inspection and testing of ready mix plants charged at the Basic Engineering rates plus testing at cost	At Cost	At Cost	At Cost
5	Cylinders made by others shall be picked up and delivered to the laboratory on a time and travel charge basis at the Basic Engineering Service Rates. A charge of \$ 24.00 per case of 24 plastic cylinder molds will be accessed when cylinders are made by others	At Cost	\$50.00	\$25.00
6	Non-Destructive inspection and testing of concrete products and structures, including failures and flexural testing of concrete beams shall be charged at the Basic Engineering Service Rates, plus velocity attenuation equipment charged at cost	At Cost	At Cost	At Cost
7	Concrete Coring			
a.	Two-man crew plus machine, per hour	\$150.00	\$150.00	\$180.00
b.	Machine only, per hour (rental)	\$50.00	\$20.00	\$165.00
c.	Compressive strength test, each	\$50.00	\$35.00	\$80.00
B.	Laboratory Services			
1	Concrete Materials			
a.	Sieve Analysis, Dry ASTM C-136, each	\$100.00	\$85.00	\$140.00
	Finer than No. 200 Sieve, ASTM C-117, each	\$100.00	\$75.00	\$100.00
b.	Specific gravity, ASTM C-127 or C-126, coarse, fine, each	\$125.00	\$50.00	\$140.00
c.	Absorption, ASTM C-127 or C-128, coarse, fine, each	\$100.00	\$125.00	\$130.00
		\$100.00	\$130.00	\$140.00
d.	Unit Weight, ASTM C-29, each	\$150.00	\$75.00	\$120.00
e.	Organic impurities (Calorimetric) ASTM C-40, each	\$50.00	\$125.00	\$130.00
f.	Effect of organic impurities, ASTM C-87, each	\$75.00	\$135.00	\$0.00
g.	Clay lumps in aggregate, AASHTO T-112, each	\$75.00	\$275.00	\$150.00
h.	Soft particles in aggregate, ASDTM C-238, each	\$75.00	\$275.00	\$150.00
i.	Friable particles in aggregate, ASTM C-142, each	\$75.00	\$275.00	\$150.00
j.	Abrasion (Los Angeles Rattler), ASTM C-131, each	\$350.00	\$375.00	\$400.00
k.	Preparation of sample for abrasion test, if crushed, each	\$250.00	\$75.00	\$0.00
l.	Staining Test, light weight aggregate, ASTM C-641, each	At Cost	\$200.00	\$0.00
m.	Loss on ignition, light weight aggregate, each	At Cost	\$75.00	\$700.00
n.	Sulfate soundness, Sodium or Magnesium, ASTM-88, five (5) cycle. Each additional five cycles without loss determination, each	\$1,500.00	\$800.00	\$0.00
o.	Potential Alkali Reactivity, each	\$1,500.00	\$100.00	\$0.00
2	Mix Verifications			
a.	Initial mix, including basis test of fine and coarse aggregate, six confirmatory cylinders, per mix	\$1,500.00	\$600.00	\$700.00
b.	Additional mixes, same aggregate, six confirmatory cylinders, per mix	\$1,000.00	\$600.00	\$700.00
c.	Flexural strength mix, six test beams including tests of aggregate, per mix	\$1,500.00	\$750.00	\$900.00
d.	Additional mixes, six test beams, some aggregate, per mix	\$1,000.00	\$750.00	\$900.00
e.	Light weight aggregate mixes, add to above, each	\$400.00	\$500.00	\$100.00
f.	Mix, no confirmatory tests (calculated), each	\$1,200.00	\$200.00	\$300.00
g.	Mix designs, applicable hourly rates	\$75.00	\$85.00	\$100.00
3	Testing of Cylinders and Beams			
a.	Cylinders compressive strength, including curing, ASTM C-39, each	\$15.00	\$8.00	\$20.00
b.	Reserves, not tested, including curing, each	\$15.00	\$8.00	\$20.00
c.	Splitting Test, ASTM C-496, each	\$25.00	\$15.00	\$0.00
d.	Beams, per break, ASTM C-78, each	\$25.00	\$45.00	\$45.00
	Note: Engineering, consultation, evaluation and preparation of samples for testing in conjunction with any above lab testing services shall be charged at the Basic Engineering Services rate.			
	Total Line 5			

6.	Block, Brick, Tile, Pipe			
A.	Field Services			
1	Inspection and testing manufacturer's plant, or in the field shall be charged at Basic Engineering Service Rates plus testing at cost	At Cost	At Cost	At Cost
2	Mortar and/or grout cubes (6 specimens per set), per set	\$120.00	\$60.00	\$100.00
B.	Laboratory Services			
	Concrete Masonry Units			
1	Compressive Strength, ASTM C-140, 5 specimens, each	\$75.00	\$60.00	\$220.00
2	Absorption and moisture content, ASTM C-140, 5 specimens, each	\$75.00	\$75.00	\$200.00
3	Linear drying shrinkage, ASTM C-341, minimum 3 specimens, each	At Cost	\$125.00	\$0.00
4	Concrete masonry block prism compressive strength tests, per set	\$250.00	\$75.00	\$600.00
	Total Line 6			
7.	Metals			
A.	Field Services			
1	Visual shop and erection inspection, including witnessing of welder's qualifications shall be charged at Basic Engineering Services Rates			
2	Radiographic, Magnetic Particle and Ultrasonic Testing Charge			
a.	2-man radiographic crew with camera and darkroom	At Cost + 10%	\$1,275.00	\$0.00
b.	Radiographic camera, loaded each, per hour	At Cost + 10%	\$150.00	\$0.00
c.	Radiographic darkroom on truck, per day	At Cost + 10%	\$2,500.00	\$0.00
d.	X-Ray machine, each, per hour	At Cost + 10%	\$175.00	\$0.00
e.	Magnetic particle machine (dry), per hour	\$50 (equip. only)	\$100.00	\$120.00
f.	Ultrasonic machine, per hour	\$50 (equip. only)	\$55.00	\$160.00
g.	Thickness and corrosion measurement equipment, per hour	\$50 (equip. only)	\$95.00	\$160.00
3	Physical and Mechanical Properties Testing			
a.	Tensile test apparent yield and ultimate strength, initial sample	At Cost + 10%	\$95.00	\$200.00
b.	Guided Bend Test, each	At Cost + 10%	\$90.00	\$200.00
	Total Line 7			
8.	Non-Destructive Structural / Materials Evaluation			
A.	Fabrication / Erection Evaluation: Evaluation of any or all of the following as established by project specification: dimensional tolerance, material certifications, welds by visual techniques, welding procedures, welder / weld operator, certifications, paint thickness, material storage conditions, column alignment, elevation verifications, bolt hole alignments and bolt torque, weld by visual techniques, steel decking, prime touch up and/or final painting			
1	AS / ASNT Senior Level Certified Technician, per hour	\$200.00	\$95.00	\$175.00
2	AWS / ASNT Certified Technician, per hour	\$125.00	\$85.00	\$160.00
3	ASNT Level II Technician, per hour	\$150.00	\$95.00	\$160.00
4	ASNT Level I Technician, per hour	\$100.00	\$75.00	\$130.00
B.	Field Non-Destructive Testing-by ASNT Level II Technician			
1	Visible dye or fluorescent penetrant, per hour	\$150.00	\$85.00	\$130.00
2	Magnetic particle-wet or dry, per hour	\$150.00	\$85.00	\$130.00
3	Ultrasonic testing, per hour	\$150.00	\$95.00	\$160.00
4	Ultrasonic equipment charge, per hour	\$50.00	\$5.00	\$140.00
5	Eddy current testing, per hour	At Cost + 10%	\$95.00	\$160.00
6	Eddy current equipment charge, per hour	At Cost + 10%	\$15.00	\$140.00
7	X or Gamma Radiography (Iridium 192), per hour, per crew	At Cost + 10%	\$250.00	\$0.00
8	Gamma Radiography (Cobalt 60) per hour, per crew	At Cost + 10%	\$350.00	\$0.00
9	Ground Penetrating Radar			
a.	Minimum rate 1/2 day rate (4 hours), per hour	\$300.00	\$800.00	\$800.00
b.	Minimum daily rate (8 hours), per hour	\$300.00	\$1,200.00	\$1,500.00
c.	Supplemental rate, per hour	\$300.00	\$50.00	\$200.00
10	Seismic refraction, per hour	At Cost + 10%	\$175.00	\$160.00

11	Laboratory Services			
a.	Liquid penetrant, per hour	\$90.00	\$85.00	\$110.00
b.	Magnetic particle, per hour	\$90.00	\$85.00	\$110.00
c.	Rockwell testing, per set	At Cost + 10%	\$135.00	\$130.00
d.	Guided bend test, each	At Cost + 10%	\$85.00	\$130.00
e.	Tensile test, each	At Cost + 10%	\$85.00	\$130.00
f.	Machine charges, each	At Cost + 10%	\$95.00	\$100.00
12	Radiographic welder coupon			
a.	Plant, each	\$125.00	\$95.00	\$200.00
b.	Pipe, each	\$150.00	\$95.00	\$200.00
13	Welding procedure qualifications			
a.	ASME, each	\$1,200.00	\$450.00	\$300.00
b.	AWS, each	\$1,000.00	\$175.00	\$300.00
14	Ultrasonic testing, per hour	\$150.00	\$95.00	\$160.00
15	Equipment charge for ultrasonic testing, per day	\$0.00	\$5.00	\$140.00
16	Eddy current testing, per hour	At Cost + 10%	\$115.00	\$160.00
17	Equipment charge for eddy current testing, per day	At Cost + 10%	\$5.00	\$140.00
18	X or Gamma Radiography			
a.	ASNT Level III, per hour	At Cost + 10%	\$125.00	\$250.00
b.	Materials Engineer, per hour	At Cost + 10%	\$135.00	\$175.00
c.	Materials Consultant, per hour	At Cost + 10%	\$145.00	\$175.00
d.	Mobile darkroom mileage, per mile	At Cost + 10%	\$0.85	\$0.00
e.	Radiographic film, current market price plus (Not to exceed 5%)	At Cost + 10%	5%	5%
f.	Special transducers required, cost plus (Not to exceed 5%)	At Cost + 10%	5%	5%
g.	Special probes, cost plus (Not to exceed 5%)	At Cost + 10%	5%	5%
19	ASTM D 2938-Unconfined compressive (PSI), each	\$250.00	5%	\$240.00
20	L.A. Abrasives (ASTM C 131), each	\$400.00	\$375.00	\$400.00
21	L.A. Abrasives (ASTM C 535), each	\$400.00	\$375.00	\$400.00
22	Fireproofing thickness, per hour	\$80.00	\$85.00	\$100.00
23	Torque wrench / rebound hammer charge, per day	\$100 (equipment)	\$150.00	\$160.00
24	Floor flatness (F-Meter) charge, per day	\$100 (equipment)	\$175.00	\$160.00
	Total Line 8			
9.	Roofing			
A.	Field Services			
	Roofing installation inspection and project meetings shall be charged at Basic Engineering Services Rates			
B.	Laboratory Services			
	Roofing Materials			
1	Dissection, including total weight, number plies, interply bitumen, top bitumen, aggregate weight and diagramming, per sample			
a.	With aggregates, (asphalt or coal tar)	\$75.00	\$175.00	\$0.00
b.	Without aggregates	\$75.00	\$150.00	\$0.00
c.	Trimming sample to proper size	\$30.00	\$50.00	\$0.00
d.	Diagramming only	\$50.00	\$75.00	\$0.00
2	Moisture Contents of felts, ASTM D-95, per sample	\$155.00	\$75.00	\$0.00
3	Unit Weight of felts, ASTM C-461, per sample	\$125.00	\$75.00	\$0.00
4	Moisture Content of aggregate, ASTM D-18864, per sample	\$125.00	\$75.00	\$0.00
	Total Line 9			
10.	Drilling Services			
A.	Mobilization and demobilization of rig			
1	All terrain mounted, each	\$600.00	\$750.00	\$1,000.00
2	Truck mounted, each	\$600.00	\$750.00	\$900.00
B.	Auger Boring			
1	0-50 feet, per LF	\$12.00	\$12.00	\$12.00
2	Greater than 50 feet, per LF	\$15.00	\$13.50	\$15.00
C.	Soil test boring with standard penetration resistance			
1	0-50 feet, per LF	\$15.00	\$15.50	\$15.00
2	Greater than 50 feet, per LF	\$17.00	\$17.50	\$18.00
D.	Undisturbed sample (3"), each	\$100.00	\$75.00	\$120.00
E.	Piston Samples (3"), each	\$250.00	\$150.00	\$200.00
F.	Setting and removing casing for rock coring, per LF	\$7.00	\$11.00	\$15.00
G.	NX or NQ rock coring with report of rock quality designation and percent recovery			
1	0-50 feet, per LF	\$52.00	\$60.00	\$90.00
2	Greater than 50 feet, per LF	\$62.00	\$70.00	\$120.00
H.	Difficult moving, water hauling, per hour	\$200.00	\$300.00	\$300.00
I.	Direct Push (includes collection of ground water and soil samples)			
1	Minimum rate 1/2 day rate (4 hours), per hour	\$1,800.00	\$1,400.00	\$4,000.00
2	Minimum daily rate (8 hours), per hour	\$2,500.00	\$2,800.00	\$5,000.00
3	Supplemental rate, per hour	\$300.00	\$300.00	\$300.00
J.	Dozer Rental for clearing access to boring locations and moving drill rig, per day	\$2,500.00	\$2,500.00	\$2,500.00
K.	Water Tank, per day	\$2,500.00	\$500.00	\$250.00
L.	Piezometer, backfilled with cuttings, non-grouted for water level measurements, per LF	\$25.00	\$15.00	\$40.00
M.	Premium for sand pack and bentonite seal of piezometer, each	\$0.00	\$25.00	\$0.00
N.	Grout seal boreholes (\$ 50.00 min. per borehole), per LF	\$10.00	\$10.00	\$15.00
O.	Subsistence: 2 man crew, per day	\$300.00	\$250.00	\$75.00
	Total Line 10			

11.	Environmental Services			
A.	Water / NPDES Monitoring			
1	Comprehensive Monitoring Plan, (CMP), LS	\$1,000.00	TBD	\$0.00
2	Monthly NPDES service (includes weekly inspection / sampling), per month	\$2,000.00	\$375.00	\$1,200.00
3	Automated sampler rental, per sampler, per month	\$500.00	\$125.00	\$0.00
4	Testing turbidity of water - GSP 20, per test	\$40.00	\$25.00	\$40.00
5	Testing Turbidity of water - GDT 109, per test	\$40.00	\$35.00	\$40.00
6	Erosion control report, each	\$250.00	\$75.00	\$80.00
7	pH test, per test	\$40.00	\$45.00	\$20.00
8	Chloride / sulfate test, per test	\$100.00	\$75.00	\$40.00
9	Monthly NPDES report to EPD, each	\$250.00	\$75.00	\$150.00
B.	Asbestos Testing			
	Testing of asbestos in accordance with 1985 edition (purple book)			
	EPA Guidance for controlling Asbestos Materials in Buildings			
	EPA Method 560 / 5-85-024, per test	10/sample	\$20.00	\$15.00
C.	Chemical / Hydrocarbon Testing			
1	Subsurface chemical testing for Total Petroleum Hydrocarbon (TPH), each	65/sample	\$65.00	\$100.00
2	Subsurface chemical testing for Total Petroleum Benzene Toluene Ethyl Xylene (BTEX), each	55/sample	\$55.00	\$100.00
3	Subsurface chemical testing for Total Petroleum Polynuclear Aromatic Hydrocarbon (PAH)	80/sample	\$115.00	\$100.00
	Total Line 11			
12.	Traffic Control and Equipment Rental			
A.	Cones, barriers and signage, per day	\$2,000.00	\$2,000.00	\$500.00
B.	Flagman, per hour	\$65.00	\$50.00	\$65.00
C.	Heavy Equipment rentals to include operator and transportation to and from site, cost plus	10%	15%	15%
	Minimum On-Site Charge for Field Services	\$0.00	\$0.00	\$0.00
	Total Line 12			
	Total Bid			

Line	Item Description	United Consulting	ECS Southeast LLC
		Norcross, GA	Marietta, GA
1.	Basic Engineering Service Rates		
A.	Engineering Services		
1	Project Geologist, per hour	\$180.00	\$70.00
2	Structural Engineer, P. E., per hour	\$180.00	\$125.00
3	Geotechnical Engineer, P. E., per hour	\$180.00	\$80.00
4	Environmental Engineer, P. E., per hour	\$180.00	\$85.00
5	Staff Engineer, per hour	\$135.00	\$80.00
6	Project Engineer / Project Manager, P. E., per hour	\$180.00	\$100.00
7	Senior Engineer / Senior Project Manager, P. E., per hour	\$210.00	\$100.00
8	Senior Engineer / Division Manager, P. E., per hour	\$215.00	\$130.00
9	Chief Engineer / Principal, P. E., per hour	\$265.00	\$160.00
10	CAD Operator / Draftsperson, per hour	\$105.00	\$50.00
B.	Technician Services		
1	Chief Engineering Technician, per hour	\$110.00	\$75.00
2	Metals Technician / Inspector, per hour	\$110.00	\$75.00
3	Concrete Technician / Inspector, per hour	\$75.00	\$60.00
4	Soils Technician / Inspector, per hour	\$75.00	\$65.00
5	Environmental Technician / Inspector, per hour	\$75.00	\$65.00
6	Asphalt Technician / Inspector, per hour	\$95.00	\$60.00
7	Registered Roof Observer (by the Roof Consultants Inst.), per hour	\$180.00	\$100.00
8	Registered Roof Consultant, per hour	\$180.00	\$80.00
9	General Engineering Technician / Inspector, per hour	\$110.00	\$55.00
10	Certified Industrial Hygienist, per hour	\$180.00	\$150.00
C.	Clerical Services		
	Secretarial, per hour	\$70.00	\$55.00
D.	Special Services, Basic Engineering Rates	At Cost	At Cost
	Total Line 1		
2.	Soils		
A.	Field Services		
	Field density tests either by drive cylinder, sand cone nuclear gauge, per hour	\$75.00	\$55.00
B.	Laboratory Services		
1	Standard Compaction Test (Method D does not include grain size)		
a.	Method A (4" mold), per test	\$135.00	\$95.00
b.	Method B, C, or D (6" mold), per test	\$135.00	\$95.00
c.	Standard Proctor, per test	\$135.00	\$95.00
2	Modified Compaction Test including rough plots and grain size curves except on base rock. Method D does not include grain size.		
a.	Method A (4" mold), per test	\$160.00	\$95.00
b.	Method B, C, or D (6" mold), per test	\$160.00	\$95.00
c.	Standard Proctor, per test	\$160.00	\$95.00
3	CBR at optimum moisture content, including laboratory compaction test with plot of compaction and CBR curves, each	\$620.00	\$200.00
4	CBR, Corps of Engineers Method, each	\$620.00	\$500.00
5	Natural moisture content, each	\$22.00	\$12.00
6	Atterberg limits, each	\$95.00	\$70.00
7	Grain size, each	\$160.00	\$65.00
8	Washed 200, each	\$140.00	\$45.00
9	Washed 200 + Hydrometer, each	\$160.00	\$100.00
10	Consolidation Test		
a.	Undisturbed sample, each	\$620.00	\$600.00
b.	Remolded sample, each	\$710.00	\$160.00
11	Triaxial Shear Test		
a.	Pile load testing ASTM (D1153), each	\$170.00	\$1,700.00
b.	Pile Driving monitoring, per LF	\$67.00	\$990.00
c.	UU Test, each	\$310.00	\$220.00
d.	CU Test, each	\$1,055.00	\$990.00
e.	CU Test with pore pressure, each	\$1,055.00	\$990.00
f.	Add for remold, each	\$100.00	\$50.00
g.	Unconfined compressive strength test, each (to calculate shear strength of soil)	\$45.00	\$80.00
12	Permeability testing (Triaxial apparatus)		
a.	Remolded, each	\$425.00	\$300.00
b.	Undisturbed, each	\$325.00	\$275.00
13	Triaxial compression test, consolidated, undrained, per pt.	\$1,055.00	\$325.00
14	California Bearing Ration (CBR), each pt.	\$170.00	\$175.00
15	Swell Test on CBR, each	\$22.00	\$50.00
16	Sand Equivalent Test GDT63, each	\$230.00	\$75.00
17	Soil resistivity, each	\$160.00	\$70.00
	Total Line 2		
3.	Soil Cement		
A.	Field Services		
	Observation of soil cement field placement, per hour	\$55.00	\$55.00

B.	Laboratory Services		
1	First soil cement mixture (includes calcium absorption test on soil sample)	\$1,055.00	\$500.00
2	Each additional cement content using same sample, add	\$165.00	\$125.00
3	For wetting and drying tests, add for each cement content	\$100.00	\$125.00
	Total Line 3		
4.	Asphaltic Materials		
A.	Field Services		
1	Observation and field testing of asphaltic concrete placement, per hour	\$85.00	\$55.00
2	Two-man asphaltic concrete coring crew, including trailer and equipment, per hour	\$130.00	\$150.00
B.	Laboratory Services-Asphaltic Materials and Tests		
1	Asphaltic Concrete Mix Design		
a.	Marshall method, per design	\$115.00	\$100.00
b.	Hubbard-field method, per design, two inch	\$240.00	\$125.00
c.	Hubbard-field method, per design, six inch	\$285.00	\$150.00
2	Bitumen content only, per test	\$165.00	\$150.00
3	Bitumen and gradation of asphaltic concrete, per test	\$185.00	\$200.00
4	Density, samples F.O.B. laboratory		
a.	Already mixed, per test	\$80.00	\$100.00
b.	Not already mixed, per test	\$165.00	\$120.00
5	Hubbard-field stability, samples F.O.B. laboratory		
a.	Three specimens, two inches	\$135.00	\$150.00
b.	Three specimens, six inches	\$185.00	\$175.00
6	Marshall Method Stability, three specimens	\$165.00	\$125.00
	Total Line 4		
5.	Concrete and Cement		
A.	Field Services		
1	Concrete quality control inspection and testing - per hour	\$75.00	\$55.00
2	Cylinders (3 specimens per set), ASTM C-39, per set	\$50.00	\$45.00
3	Reserve cylinders, each	\$15.00	\$15.00
4	Inspection and testing of ready mix plants charged at the Basic Engineering rates plus testing at cost	At Cost	At Cost
5	Cylinders made by others shall be picked up and delivered to the laboratory on a time and travel charge basis at the Basic Engineering Service Rates. A charge of \$ 24.00 per case of 24 plastic cylinder molds will be accessed when cylinders are made by others	\$130.00	\$24.00
6	Non-Destructive inspection and testing of concrete products and structures, including failures and flexural testing of concrete beams shall be charged at the Basic Engineering Service Rates, plus velocity attenuation equipment charged at cost	At Cost	At Cost
7	Concrete Coring		
a.	Two-man crew plus machine, per hour	\$240.00	\$200.00
b.	Machine only, per hour (rental)	\$110.00	\$50.00
c.	Compressive strength test, each	\$45.00	\$15.00
B.	Laboratory Services		
1	Concrete Materials		
a.	Sieve Analysis, Dry ASTM C-136, each	\$60.00	\$55.00
	Finer than No. 200 Sieve, ASTM C-117, each	\$60.00	\$50.00
b.	Specific gravity, ASTM C-127 or C-126, coarse, fine, each	\$160.00	\$50.00
c.	Absorption, ASTM C-127 or C-128, coarse, fine, each	\$60.00	\$60.00
	fine, each	\$60.00	\$50.00
d.	Unit Weight, ASTM C-29, each	\$60.00	\$50.00
e.	Organic impurities (Calorimetric) ASTM C-40, each	\$190.00	\$40.00
f.	Effect of organic impurities, ASTM C-87, each	\$190.00	\$100.00
g.	Clay lumps in aggregate, AASHTO T-112, each	\$110.00	\$60.00
h.	Soft particles in aggregate, ASDTM C-238, each	\$115.00	\$90.00
i.	Friable particles in aggregate, ASTM C-142, each	\$115.00	\$80.00
j.	Abrasion (Los Angeles Rattler), ASTM C-131, each	\$180.00	\$160.00
k.	Preparation of sample for abrasion test, if crushed, each	\$145.00	\$40.00
l.	Staining Test, light weight aggregate, ASTM C-641, each	\$180.00	\$1,520.00
m.	Loss on ignition, light weight aggregate, each	\$120.00	\$100.00
n.	Sulfate soundness, Sodium or Magnesium, ASTM-88, five (5) cycle. Each additional five cycles without loss determination, each	\$340.00	\$125.00
o.	Potential Alkali Reactivity, each	\$980.00	\$100.00
2	Mix Verifications		
a.	Initial mix, including basis test of fine and coarse aggregate, six confirmatory cylinders, per mix	\$270.00	\$500.00
b.	Additional mixes, same aggregate, six confirmatory cylinders, per mix	\$135.00	\$150.00
c.	Flexural strength mix, six test beams including tests of aggregate, per mix	\$400.00	\$450.00
d.	Additional mixes, six test beams, same aggregate, per mix	\$400.00	\$350.00
e.	Light weight aggregate mixes, add to above, each	\$55.00	\$20.00
f.	Mix, no confirmatory tests (calculated), each	\$55.00	\$150.00
g.	Mix designs, applicable hourly rates	\$110.00	\$90.00
3	Testing of Cylinders and Beams		
a.	Cylinders compressive strength, including curing, ASTM C-39, each	\$17.00	\$15.00
b.	Reserves, not tested, including curing, each	\$17.00	\$15.00
c.	Splitting Test, ASTM C-496, each	\$85.00	\$45.00

	d. Beams, per break, ASTM C-78, each	\$37.00	\$40.00
	Note: Engineering, consultation, evaluation and preparation of samples for testing in conjunction with any above lab testing services shall be charged at the Basic Engineering Services rate.		
	Total Line 5		
6.	Block, Brick, Tile, Pipe		
A.	Field Services		
1	Inspection and testing manufacturer's plant, or in the field shall be charged at Basic Engineering Service Rates plus testing at cost	At Cost	At Cost
2	Mortar and/or grout cubes (6 specimens per set), per set	\$110.00	\$75.00
B.	Laboratory Services		
	Concrete Masonry Units		
1	Compressive Strength, ASTM C-140, 5 specimens, each	\$400.00	\$100.00
2	Absorption and moisture content, ASTM C-140, 5 specimens, each	\$50.00	\$50.00
3	Linear drying shrinkage, ASTM C-341, minimum 3 specimens, each	\$270.00	\$75.00
4	Concrete masonry block prism compressive strength tests, per set	\$75.00	\$50.00
	Total Line 6		
7.	Metals		
A.	Field Services		
1	Visual shop and erection inspection, including witnessing of welder's qualifications shall be charged at Basic Engineering Services Rates		
2	Radiographic, Magnetic Particle and Ultrasonic Testing Charge		
a.	2-man radiographic crew with camera and darkroom	\$270.00	\$150.00
b.	Radiographic camera, loaded each, per hour	\$600.00	\$80.00
c.	Radiographic darkroom on truck, per day	\$900.00	\$50.00
d.	X-Ray machine, each, per hour	\$900.00	\$50.00
e.	Magnetic particle machine (dry), per hour	\$120.00	\$0.00
f.	Ultrasonic machine, per hour	\$120.00	\$0.00
g.	Thickness and corrosion measurement equipment, per hour	\$150.00	\$0.00
3	Physical and Mechanical Properties Testing		
a.	Tensile test apparent yield and ultimate strength, initial sample	\$210.00	\$100.00
b.	Guided Bend Test, each	\$180.00	\$55.00
	Total Line 7		
8.	Non-Destructive Structural / Materials Evaluation		
A.	Fabrication / Erection Evaluation: Evaluation of any or all of the following as established by project specification: dimensional tolerance, material certifications, welds by visual techniques, welding procedures, welder / weld operator, certifications, paint thickness, material storage conditions, column alignment, elevation verifications, bolt hole alignments and bolt torque, weld by visual techniques, steel decking, prime touch up and/or final painting		
1	AS / ASNT Senior Level Certified Technician, per hour	\$110.00	\$105.00
2	AWS / ASNT Certified Technician, per hour	\$85.00	\$115.00
3	ASNT Level II Technician, per hour	\$85.00	\$115.00
4	ASNT Level I Technician, per hour	\$85.00	\$105.00
B.	Field Non-Destructive Testing-by ASNT Level II Technician		
1	Visible dye or fluorescent penetrant, per hour	\$95.00	\$65.00
2	Magnetic particle-wet or dry, per hour	\$95.00	\$65.00
3	Ultrasonic testing, per hour	\$95.00	\$65.00
4	Ultrasonic equipment charge, per hour	\$120.00	\$10.00
5	Eddy current testing, per hour	\$95.00	\$45.00
6	Eddy current equipment charge, per hour	\$180.00	\$10.00
7	X or Gamma Radiography (Iridium 192), per hour, per crew	\$145.00	\$105.00
8	Gamma Radiography (Cobalt 60) per hour, per crew	\$145.00	\$125.00
9	Ground Penetrating Radar		
a.	Minimum rate 1/2 day rate (4 hours), per hour	\$1,850.00	\$165.00
b.	Minimum daily rate (8 hours), per hour	\$2,600.00	\$165.00
c.	Supplemental rate, per hour	\$480.00	\$165.00
10	Seismic refraction, per hour	\$180.00	\$165.00
11	Laboratory Services		
a.	Liquid penetrant, per hour	\$65.00	\$40.00
b.	Magnetic particle, per hour	\$65.00	\$45.00
c.	Rockwell testing, per set	\$60.00	\$50.00
d.	Guided bend test, each	\$60.00	\$50.00
e.	Tensile test, each	\$80.00	\$50.00
f.	Machine charges, each	\$75.00	\$40.00
12	Radiographic welder coupon		
a.	Plant, each	\$170.00	\$80.00
b.	Pipe, each	\$170.00	\$100.00
13	Welding procedure qualifications		
a.	ASME, each	\$400.00	\$80.00
b.	AWS, each	\$400.00	\$80.00
14	Ultrasonic testing, per hour	\$85.00	\$100.00
15	Equipment charge for ultrasonic testing, per day	\$110.00	\$0.00
16	Eddy current testing, per hour	\$85.00	\$100.00

17	Equipment charge for eddy current testing, per day	\$110.00	\$0.00
18	X or Gamma Radiography		
a.	ASNT Level III, per hour	\$110.00	\$125.00
b.	Materials Engineer, per hour	\$135.00	\$125.00
c.	Materials Consultant, per hour	\$180.00	\$125.00
d.	Mobile darkroom mileage, per mile	\$0.0690	\$0.57
e.	Radiographic film, current market price plus (Not to exceed 5%)	3.50%	5.00%
f.	Special transducers required, cost plus (Not to exceed 5%)	3.50%	5.00%
g.	Special probes, cost plus (Not to exceed 5%)	3.50%	5.00%
19	ASTM D 2938-Unconfined compressive (PSI), each	\$75.00	\$165.00
20	L.A. Abrasives (ASTM C 131), each	\$180.00	\$180.00
21	L.A. Abrasives (ASTM C 535), each	\$180.00	\$180.00
22	Fireproofing thickness, per hour	\$110.00	\$50.00
23	Torque wrench / rebound hammer charge, per day	\$15.00	\$25.00
24	Floor flatness (F-Meter) charge, per day	\$60.00	\$150.00
	Total Line 8		
9.	Roofing		
A.	Field Services		
	Roofing installation inspection and project meetings shall be charged at Basic Engineering Services Rates		
B.	Laboratory Services		
	Roofing Materials		
1	Dissection, including total weight, number plies, interply bitumen, top bitumen, aggregate weight and diagramming, per sample		
a.	With aggregates, (asphalt or coal tar)	\$600.00	\$175.00
b.	Without aggregates	\$700.00	\$150.00
c.	Trimming sample to proper size	\$480.00	\$35.00
d.	Diagramming only	\$60.00	\$85.00
2	Moisture Contents of felts, ASTM D-95, per sample	\$360.00	\$50.00
3	Unit Weight of felts, ASTM C-461, per sample	\$60.00	\$50.00
4	Moisture Content of aggregate, ASTM D-18864, per sample	\$90.00	\$30.00
	Total Line 9		
10.	Drilling Services		
A.	Mobilization and demobilization of rig		
1	All terrain mounted, each	\$810.00	\$750.00
2	Truck mounted, each	\$690.00	\$500.00
B.	Auger Boring		
1	0-50 feet, per LF	\$12.00	\$6.75
2	Greater than 50 feet, per LF	\$13.00	\$7.75
C.	Soil test boring with standard penetration resistance		
1	0-50 feet, per LF	\$14.00	\$16.50
2	Greater than 50 feet, per LF	\$18.00	\$17.50
D.	Undisturbed sample (3"), each	\$125.00	\$65.00
E.	Piston Samples (3"), each	\$210.00	\$85.00
F.	Setting and removing casing for rock coring, per LF	\$18.00	\$7.00
G.	NX or NQ rock coring with report of rock quality designation and percent recovery		
1	0-50 feet, per LF	\$100.00	\$65.00
2	Greater than 50 feet, per LF	\$105.00	\$75.00
H.	Difficult moving, water hauling, per hour	\$300.00	\$200.00
I.	Direct Push (includes collection of ground water and soil samples)		
1	Minimum rate 1/2 day rate (4 hours), per hour	\$1,300.00	\$200.00
2	Minimum daily rate (8 hours), per hour	\$2,700.00	\$225.00
3	Supplemental rate, per hour	\$330.00	\$200.00
J.	Dozer Rental for clearing access to boring locations and moving drill rig, per day	\$2,400.00	\$1,250.00
K.	Water Tank, per day	\$270.00	\$200.00
L.	Piezometer, backfilled with cuttings, non-grouted for water level measurements, per LF	\$60.00	\$9.00
M.	Premium for sand pack and bentonite seal of piezometer, each	\$25.00	\$0.00
N.	Grout seal boreholes (\$ 50.00 min. per borehole), per LF	\$25.00	\$7.00
O.	Subsistence: 2 man crew, per day	\$1,490.00	\$250.00
	Total Line 10		
11.	Environmental Services		
A.	Water / NPDES Monitoring		
1	Comprehensive Monitoring Plan, (CMP), LS	\$110.00	\$900.00
2	Monthly NPDES service (includes weekly inspection / sampling), per month	\$1,020.00	\$850.00
3	Automated sampler rental, per sampler, per month	\$270.00	\$130.00
4	Testing turbidity of water - GSP 20, per test	\$35.00	\$25.00
5	Testing Turbidity of water - GDT 109, per test	\$35.00	\$25.00
6	Erosion control report, each	\$110.00	\$25.00
7	pH test, per test	\$30.00	\$15.00
8	Chloride / sulfate test, per test	\$110.00	\$30.00
9	Monthly NPDES report to EPD, each	\$110.00	\$75.00
B.	Asbestos Testing		
	Testing of asbestos in accordance with 1985 edition (purple book)		
	EPA Guidance for controlling Asbestos Materials in Buildings		

	EPA Method 560 / 5-85-024, per test	\$35.00	\$30.00
C.	Chemical / Hydrocarbon Testing		
1	Subsurface chemical testing for Total Petroleum Hydrocarbon (TPH), each	\$110.00	\$45.00
2	Subsurface chemical testing for Total Petroleum Benzene Toluene Ethyl Xylene (BTEX), each	\$60.00	\$50.00
3	Subsurface chemical testing for Total Petroleum Polynuclear Aromatic Hydrocarbon (PAH)	\$110.00	\$80.00
	Total Line 11		
12.	Traffic Control and Equipment Rental		
A.	Cones, barriers and signage, per day	\$1,150.00	\$50.00
B.	Flagman, per hour	\$100.00	\$50.00
C.	Heavy Equipment rentals to include operator and transportation to and from site, cost plus	12%	10%
	Minimum On-Site Charge for Field Services		
		Avg Price	Avg Price
		Increase 22.73%	Increase 0.87%

Denotes Price Increase