(6) The Contractor shall make those inspections and perform those tests at those locations and at those times as directed by the City Engineer.

(7) The Contractor shall invoice the City Engineer on a monthly basis for services performed. A separate invoice shall be submitted for each project for which services were performed on, and the invoice shall describe the project name and City contract numbering, the date the services were performed, the hours for each of the Contractor's employees and their respective rates, and the number and description of reimbursable test.

Such payments shall be full compensation for services rendered and for all labor, materials, supplies, equipment and incidentals necessary to complete the services rendered.

There shall be no charge for mileage to and from projects other than drill rig mobilization.

(8) The Contractor shall provide the services described in this contract at the following rates:

(a) General.

Laboratory Technician	$No Charge	per Hour
Field Technician	$29 - ~~$45~~ 55	per Hour
Field Engineer	$68 - ~~77~~ 80	per Hour
Professional Engineer	90 ~~$87~~ - 99	per Hour

Note: The above rates apply to the position and services performed regardless of the status of classification of the person performing the services.

(b) Equipment for Compaction Testing — $9 per Field Density Test

(c) Soil Investigations and Monitoring Well/Probe Installations.

Drilling Rig Mobilization		
Truck Mounted	~~$290~~	Each ~~$~~ 320
Track Mounted	~~$330~~	Each ~~$~~ 350
Equipment Decontamination (when required)	$200	Day
Traffic Control – Signs	~~$110~~	Day ~~$~~ 120
Standard Soil Borings (ASTM D 1586)		
0' – 10' No Bentonite Backfill	~~$13~~	V.F. 13.50
0' – 20' Bentonite Backfill	~~$16~~	V.F. 16.50
20' – 40' Bentonite Backfill	~~$17~~	V.F. 17.50
Casing for Rotary Drilling	~~$7~~	V.F. 7.50
Additional Split Spoon Sample	$25	V.F.
Machine Auger Borings		
No Bentonite Backfill	~~$10.5~~	V.F. 11
Bentonite Backfill	$14	V.F.
Asphalt Patch Borehole	~~$25~~	Each 30
Concrete Patch Borehole	~~$30~~	Each 35
Continuous Tube Sampling, 3" Tube	$130	Five Ft. of Depth
	$260	Ten Ft. of Depth

Drill Concrete Pavement in Excess of 4" Thickness	~~$50~~	Test Hole	$60
Direct Push Sampling			
0' - 20' Depth	~~$11.5~~	L.F.	12
20' - 40' Depth	~~$11.5~~	L.F.	12
Water Sample Collection (peristaltic)	$40	Each	
Shallow Water Sediment Cores	$300	V.F.	
Deep Water Sediment Cores:			
5'-10' Depth	$375	V.F.	
10'-20' Depth	$450	V.F.	
20'-30' Depth	$500	V.F.	
Monitoring Well/Probe Installation			
Boring (2.25" I.D. Auger), 0' - 40' Depth	~~$13~~	L.F.	13,50
Boring (3.25" I.D. Auger), 0' - 40' Depth	~~$14.5~~	L.F.	15
Boring (6.25" I.D. Auger), 0' - 40' Depth	~~$17.5~~	L.F.	18
Boring (6.25" I.D. Auger), 40' - 80' Depth	~~$20~~	L.F.	20,50
Boring (6.25" I.D. Auger), 80' - 120' Depth	~~$26.5~~	L.F.	27
Boring (8.25" I.D. Auger), 0' - 40' Depth	~~$32.5~~	L.F.	33
Generator	~~$60~~	Day	85
Rock Drilling - Air Rotary (6-inch dia.)	~~$33~~	L.F.	38
Air Compressor - Air Rotary (750 cfm)	$375	Day	
Rock Drilling - Casing/Mud (6-inch dia.)	$30	L.F.	
1.0 Inch Schedule 40 PVC Well Casing, incl. installation and backfill	$16	L.F.	
2.5 Inch Schedule 40 PVC Well Casing, incl. installation and backfill	$16	L.F.	
2.5 Inch Schedule 80 PVC Well Casing, incl. installation and backfill	$20	L.F.	
6.0 Inch Schedule 80 PVC Well Casing, incl. installation and backfill	$48	L.F.	
Sand and Bentonite (Various Gradation)	$11	Bag	
Protective Casing (6" Aluminum) (w/ cap)	$200	Each	
Protective Casing (10" Steel) (w/ cap)	$250	Each	
Protective Casing (PVC Flush Mount)	$70	Each	
Well Development	$75	Hour	
Water Haul	$120	Each	
Soil Classification and WDNR Logs	$11	Each	
Hydraulic Conductivity Testing (Well Slug Test)	$165	Hour	
Rock Coring	~~$48~~	L.F.	$55
Well Repair Crew	~~$175~~	Hour	$200
Well Repair Parts (fill in the % charge)	5	Cost plus %	

Rock Coring Set-up $275 each

(d) Laboratory Tests

Atterberg Limits	~~$55~~	per Set 60
Wash and Dry Sieve Analysis	$50	Each
Unconfined Compressive Strength	$50	Each
Wet and Dry Densities	$25	Each
Loss on Ignition	~~$30~~	Each 40
Natural Moisture Content	~~$5~~	Each 7
Particle size distribution by hydrometer (with curve)	$99	per Sample
Hydraulic conductivity by falling head method	$175	per Sample
Hydraulic conductivity by ASTM D 5084	$400	per Sample
Optimum Moisture/Maximum Density Test Curve (Check Point Curve)		
Clay Soils	$50	per Sample
Granular Soils	$50	per Sample
Optimum Moisture/Maximum Density Test Curve (3-point Proctor)		
Clay soils	$150	per Sample
Granular soils	$150	per Sample

(e) Sampling Equipment

2-inch diameter Shelby tubes, 30-inches long, with end caps	$53	Each
2-inch diameter Shelby tubes, 36-inches long, with end caps	$53	Each
3-inch diameter Shelby tubes, 12-inches long, with end caps	$48	Each
3-inch diameter Shelby tubes, 18-inches long, with end caps	$50	Each
3-inch diameter Shelby tubes, 24-inches long, with end caps	$53	Each
3-inch diameter Shelby tubes, 30-inches long, with end caps	$60	Each
3-inch diameter Shelby tubes, 36-inches long, with end caps	$60	Each
Chipped bentonite, 50-pound bags	$11	per Bag
Granular bentonite, 50-pound bags	$11	per Bag

(f) Core/Soil Analysis (Lab costs exclusive of personnel). There shall be no additional charge for laboratory equipment required to perform the services rendered, other than those listed below. Prices below are for standard ten (10) working day turnaround. Premium charge for 24 hour turnaround shall increase the below cost by two times, premium charge for 2 to 3 working day turnaround shall increase the below cost by 1.75 times, premium charge for 4 to 5 working day turnaround shall increase the below cost by 1.3 times. Note: Turnaround times begins when samples arrive at laboratory.

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Chemical/Parameter	Minimum Soil Limit of Detection (mg/kg)	Proposed Method	Soil Sample Test Cost	TCLP Elutriate Test Cost	
Metals					
Arsenic, total	0.039	EPA 6010	$13	$13	14
Barium	5500	EPA 6010	$13	$13	14
Cadmium, total	8	EPA 6010	$13	$13	14
Chromium, total	14	EPA 6010	$13	$13	14
Chromium, hexavalent	14	EPA 7196	$60		120
Copper, total	14	EPA 6010	$13	$13	14
Lead, total	50	EPA 6010	$13	$13	14
Manganese, total	50	EPA 6010	$13	$13	14
Mercury, total	4.7	EPA 7471	$32	$32	34
Nickel, total	310	EPA 6010	$13	$13	14
Selenium, total	78	EPA 6010	$13	$13	14
Zinc, total	2300	EPA 6010	$13	$13	14
Nutrients					
Nitrogen, Ammonia	--	EPA 350.1	$104#		110
Nitrogen, Kjeldahl, Total	7800	EPA 351.2	$104#		110
Nitrogen, NO2 plus NO3	--	EPA 351.3	$104#		110
Phosphorus	1.6	EPA 365.4	$28		
Polycyclic Aromatic Hydrocarbons					
1-Methylnapthalene	8.8	EPA 8270 SIM	$105	$105	110
2-Methylnapthalene	8.8				
Acenaphthene	900				
Acenaphthylene	8.8				
Anthracene	5000				
Benzo(a)anthracene	0.088				
Benzo(a)pyrene	0.0088				
Benzo(b)fluoranthene	0.088				
Benzo(g,h,i)perylene	0.88				
Benzo(k)fluoranthene	0.88				
Chrysene	8.8				
Dibenzo(a,h)anthracene	0.0088				
Fluoranthene	600				
Fluorene	600				
Indeno(1,2,3-cd)pyrene	0.088				
Naphthalene	600				
Phenanthrene	0.88				
Pyrene	500				

2014 2015

Chemical/Parameter	Minimum Soil Limit of Detection (mg/kg)	Proposed Method	Soil Sample Test Cost	TCLP Elutriate Test Cost	
Organic Compounds					
Full VOC Scan*	--	EPA 8260	$88	$88	90
Benzene	0.0055	EPA 8021+	$33	$33	35
1,2-Dichloroethane	0.0049				
Ethylbenzene	2.9				
Toluene	1.5				
Xylenes, Total	4.1				
DRO	100	WI 8015	$40		42
GRO	100	WI 8021	$31		33
Hexane Extractable Material (Oil and Grease)	--	9071	$66		70
Pesticides					
Aldrin	0.38	EPA 8081	$155	$155	160
Dieldrin	0.04				
Endrin	23				
Heptachlor	0.14				
Lindane	--				
Toxaphene	0.58				
Trans-Chlordane	0.49				
Cis-Chlordane	0.49				
o,p-DDT	1.9				
p,p-DDT	1.9				
o,p-DDD	1.9				
p,p-DDD	1.9				
o,p-DDE	1.9				
p,p-DDE	1.9				
Miscellaneous					
Total Cyanide	--	EPA 9012	$42	$13	44/14
PCBs, Total	0.05	EPA 8082	$143	$143	145
pH	--	EPA 9045	$12		13
Total Organic Carbon	--	EPA 9060	$66		70
Electrical Conductivity	--	EPA 9050	$20		21
Fecal Coliform	--	SM 9222D	$32		34

*Detection limits for VOCs in soils and water shall meet industry standards.
Nutrients: Nitrogen tests performed as group.
+ EPA 8021 test is without 1,2 Dichloroethane. EPA 8260 full VOC scan includes 1,2 Dichloroethane.
Note: 1) Protocal B (attached) to be invoiced as lump sum of ~~$860.00~~ $910.00

2) TCLP EXTRACTION $60

G. Billing and Payment.

The Contractor will submit invoices to the City monthly for work completed and accepted to date. Invoices are to be paid no later than thirty (30) days after the date of approval by the City. The Contractor will also indicate the contract name, the billing category and number, and the billing interval on each invoice and shall compile and submit separate invoices correlated with each of the following categories:

ENGINEERING	
Resurfacing Streets	~~14-1~~ 15-1
Reconstructing Streets	~~14-2~~ 15-2
Assessable and Privately Contracted Streets	~~14-3~~ 15-3
PARKS DIVISION	
Parking Lots and Various Courts	~~14-4~~ 15-4
OTHER CITY DIVISIONS	
Parking Lots and Miscellaneous	~~14-7~~ 15-7