

**THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
BOARD ACTION SUMMARY**

DEPT: Environmental Resources

BOARD AGENDA: 5.B.1
AGENDA DATE: February 6, 2018

SUBJECT:

Approval of Amendment No. 1 to the Agreement for Professional Design Services with Geo-Logic Associates, Inc., for Construction Quality Assurance Services during the Construction of Fink Road Landfill's Class II LF-3 Cell 4 Base Liner and Leachate Collection System

BOARD ACTION AS FOLLOWS:

RESOLUTION NO. 2018-0065

On motion of Supervisor Chiesa , Seconded by Supervisor Monteith
and approved by the following vote,

Ayes: Supervisors: Olsen, Chiesa, Withrow, Monteith, and Chairman DeMartini

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: None

1) Approved as recommended


2) Denied

3) Approved as amended

4) Other:

MOTION:

ATTEST:



ELIZABETH A. KING, Clerk of the Board of Supervisors

File No.

**THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
AGENDA ITEM**

DEPT: Environmental Resources

BOARD AGENDA:5.B.1
AGENDA DATE: February 6, 2018

CONSENT:

CEO CONCURRENCE: YES

4/5 Vote Required: No

SUBJECT:

Approval of Amendment No. 1 to the Agreement for Professional Design Services with Geo-Logic Associates, Inc., for Construction Quality Assurance Services during the Construction of Fink Road Landfill's Class II LF-3 Cell 4 Base Liner and Leachate Collection System

STAFF RECOMMENDATION:

1. Approve Amendment No. 1 to Professional Design Services Agreement No. A102416 with Geo-Logic Associates, Inc., for Construction Quality Assurance services during construction of the Fink Road Landfill's Class II LF-3 Cell 4 Base Liner and Leachate Collection System, which increases the contract by \$75,453, for a not-to-exceed amount of \$208,327.
2. Authorize the Director of Environmental Resources, or designee, to execute Amendment No. 1 with Geo-Logic Associates, Inc., and to sign any necessary documents.
3. Authorize the Director of Environmental Resources, or designee, to sign additional related amendments for an overall total not-to-exceed amount of \$215,872, which includes a contingency of \$7,545.

DISCUSSION:

The Department of Environmental Resources (DER), Landfill Division, maintains and operates the Fink Road Landfill and provides post closure maintenance for the Geer Road Landfill. The day-to-day operation and maintenance of the Fink Road Landfill is performed by in-house staff; however, specialized services and expertise are needed in the area of construction quality assurance (CQA) and related work necessary for the current construction of a Class II LF-3 Cell 4 Base Liner and Leachate Collection System at the Fink Road Landfill.

The Fink Road Landfill is currently disposing of Class II municipal solid waste (MSW) in Landfill 3, Cell Number 3. Class II MSW consists of ash that is generated by the on-site Covanta Waste to Energy Plant. It is estimated that this cell has less than one year of disposal capacity remaining; however, a limited amount of capacity also remains in Cells 1 and 2. The new cell currently being constructed is within the existing landfill permitted area and is referred to as Landfill 3, Cell Number 4. This cell will provide approximately ten years of Class II MSW ash disposal capacity for the County. It is anticipated that this cell will be ready for use by the second quarter of 2018.

In preparation for the construction of Cell 4, DER, in partnership with the General Services Agency (GSA) Purchasing Division, issued a Request for Proposal (RFP) for CQA services for this project. DER and GSA Purchasing staff selected Geo-Logic Associates, Inc., as the most qualified consultant based on the results of the evaluation criteria, and on December 20, 2016, the Board approved DER to enter into a contract with Geo-Logic Associates.

The original scheduled days of construction for this project was estimated at 54 working days by Golder Associates, the design consultant who developed the construction plans and specifications. Correspondingly, the Agreement with Geo-Logic Associates, Inc., originally budgeted for 54 working days of on-site CQA services. However, Ford Construction, the construction contractor, revised the work schedule to an estimated 80 working days, which was deemed more appropriate for the size and scope of the project. In line with the updated construction schedule, the agreement with Geo-Logic Associates, Inc. needs to be amended to reflect an 80 working days schedule. In the event construction extends beyond the estimated 80 working days for completion, an additional 20 working days has also been included in the contract, to be used on an as-needed basis. The contract budgets for a total of 100 working days.

POLICY ISSUE:

Government Code Section 23005 and 25502.5 requires Board of Supervisors' approval for all contracts exceeding \$100,000.

FISCAL IMPACT:

The amendment increases the contract by \$75,453, for a total contract amount of \$208,327. In addition, staff is asking for a 10% contingency of \$7,545, for an overall not to exceed amount of \$215,872. Sufficient appropriations exist in the Fiscal Year 2017-2018 Adopted Final Budget for the Fink Road Landfill to cover the cost of these services.

BOARD OF SUPERVISORS' PRIORITY:

The recommended actions are consistent with the Board's priorities of *Delivering Efficient Public Services and Infrastructure* by providing adequate disposal space at the Fink Road Landfill, thus promoting a safe and healthy environment and improving quality of life in the community.

STAFFING IMPACT:

Existing staff will oversee the work related to this Agreement.

CONTACT PERSON:

Jami Aggers, Director of Environmental Resources
Janis Mein, Assistant Director

Telephone: 209-525-6770
Telephone: 209-525-6770

ATTACHMENT(S):

1. GeoLogic Associates Amendment 1



DEPARTMENT OF ENVIRONMENTAL RESOURCES
3800 Cornucopia Way, Suite C, Modesto, CA 95358
Phone: (209) 525-6700
Fax: (209) 525-6773

AMENDMENT NO. 1

TO

**STANISLAUS COUNTY PROFESSIONAL DESIGN SERVICES AGREEMENT
WITH
GEOLOGIC ASSOCIATES, INC.**

This Amendment No. 1 to the Professional Design Services Agreement ("Amendment No. 1") by and between the County of Stanislaus ("County") and Geologic Associates, Inc. ("Consultant") is made and entered into on February 6, 2018.

Whereas, the County and Consultant entered into an Agreement for Professional Design Services dated December 20, 2016, ("the Agreement"); and

Whereas, Paragraph 7.20 - Amendments of the Agreement provides that the Agreement may be amended in writing by mutual consent of both parties; and

Whereas, the original estimated days of construction for the project have been extended from 54 working days to 80 working days; and

Whereas, there is still a possibility that additional construction days will be needed to complete the project, resulting in the County's desire to budget for a total of 100 working days; and

Whereas, the County has a need to increase funding to this Agreement by \$75,453, in order to allow for the additional working days of the project; and

Whereas, this amendment is for the mutual benefit of County and Consultant;

Now, therefore, the County and Consultant agree as follows:

1. Section 2 Compensation and Billing, Item 2.1- Compensation of the Agreement is amended to read as follows:

"Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C", attached hereto and made a part of this Agreement (the "Fee Schedule"). Consultant's compensation shall in no case exceed **Two Hundred Eight Thousand, Three Hundred Twenty-Seven Dollars \$208,327.00**. Consultant will be compensated on a time and materials basis, based on the hours worked by the Consultant's employees or subcontractors at the hourly rates specified in the Fee Schedule. The Fee Schedule rates include direct salary costs, employee benefits, and overhead. The rates stated in the Fee Schedule are not adjustable during the term of this Agreement. The County may retain ten percent of all periodic or progress payments made to the Consultant until completion and acceptance of all work tasks and County shall have right to withhold payment from Consultant for any unsatisfactory service until such time service is performed satisfactorily."

2. Exhibit A, Scope of Work, Section 4 "CQA Planning, Coordinating, and Administrative Services", Item 4.1 "Project Schedule" is amended to read as follows:

"Project Schedule: At the beginning of the Project, the Consultant's CQA Officer and CQA Monitor shall review the project schedule and have a clear understanding of the proceeding of various work tasks and the estimated time required for completion of each task, including

construction dates, development activities and construction meetings. The estimated days of construction are 80 working days. Consultant shall make recommendations to the Project Manager regarding construction timeline, as appropriate.

Additional Construction Days As-Needed: In the event construction extends beyond the estimated 80 days for completion, Consultant shall bill each extra construction day on a time and material basis, in accordance with the attached Amended Exhibit C Fee Schedule. A total of 100 construction days has been budgeted for under this Amendment."

3. Exhibit A, Scope of Work, Section F "Representatives" is amended to read as follows:

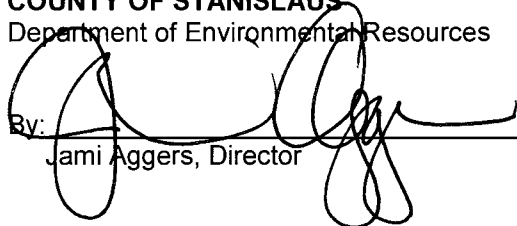
"The County's representatives are Don Hamaguchi, Project Manager, (209) 606-2527, and Craig Cissell, Landfill Manager III, (209) 837-4816."

4. Attached to this amendment is the Amended Exhibit C Fee Schedule.

5. Except as stated herein, all other terms and conditions of the Agreement remain unchanged.

In witness whereof, the parties have executed this Amendment on the date written above.


COUNTY OF STANISLAUS
Department of Environmental Resources

By: 

Jami Aggers, Director

"County"

APPROVED AS TO FORM:
John P. Doering, County Counsel

By: 

Amanda Dehart, Deputy County Counsel

GEO-LOGIC ASSOCIATES, INC.

By: 

Gary Lass, PG, CEG, CHG
Chief Executive Officer

"Consultant"

B. Michael Yacyshyn, PE
Regional Manager

EXHIBIT C

AMENDED FEE SCHEDULE

1. PRICE SCHEDULE:

The Consultant shall provide all the supervision, labor, equipment, materials and tools necessary to perform the services identified in Exhibit A – Scope of Work and in accordance with the rate schedule below. The below fee schedule is in effect through the end of this Agreement.

2. RATES

The Consultant shall be compensated on a time and material basis based on the hourly rates, and the not to exceed amounts for each task as set forth below. The following hourly billable rates include: labor, benefits, taxes, overhead/general & administrative (G&A), profit, and ancillary charges such as copies, faxes, telephones, postage, paper clips, binders, company cars, fuel, insurance, vehicle or equipment maintenance, cellular phone charges, computer charges (CADD, word-processing, mapping), etc.

<u>PROFESSIONAL STAFF</u>	<u>UNIT RATE</u>
Staff Professional.....	\$112.00/Hour
Project Professional I.....	138.00/Hour
Project Professional II.....	163.00/Hour
Senior Professional.....	178.00/Hour
Supervising Professional.....	203.00/Hour
Principal Professional.....	224.00/Hour
Court Appearance (Expert Witness, Deposition, etc.; four-hour minimum)	2 x Hourly Rate

<u>FIELD/LABORATORY STAFF</u>	
Technician I.....	80.00/Hour
Technician II.....	87.00/Hour
Senior Technician (or Minimum Prevailing Wage)	97.00/Hour
Supervising Technician.....	112.00/Hour
Managing Technician.....	128.00/Hour

<u>SUPPORT STAFF</u>	
CADD/Designer	112.00/Hour
CADD Operator/Geotechnical Draftsperson.....	92.00/Hour
Geotechnical Clerk/Typist.....	59.00/Hour
Word Processor	82.00/Hour

*Overtime Premium is 35% of PERSONNEL CHARGE

<u>EQUIPMENT CHARGES</u>	
BAT Permeameter	200.00/Day
Compaction Testing Equipment & Supplies	50.00/Day
Peel & Shear Strength Apparatus (FML Seams).....	900.00/Month
Portable Laboratory (8' x 32' trailer) with equipment.....	1,200/Month
Portable Laboratory (mobilization / demobilization).....	1,500.00
ReMi/Refraction Seismograph.....	600.00/Day
Sealed Single Ring Infiltrometer (SSRI)	200.00/Day or 750.00/Month
Sealed Double Ring Infiltrometer (SDRI).....	Call for Quote
Slope Inclinometer	250.00/Day

EXPENSES

Vehicle Use for Field Services.....	14.00/Hour or 320.00/week
Soil Sampling Equipment & Drilling Supplies	5.00/Hour
Groundwater Sampling Equipment and Supplies.....	15.00/Hour
Per Diem	Per County Travel Policy
Outside Services (Consultants, Surveys, Chemical lab Tests, etc.)	Cost + 15%
Reimbursables (Maps, Photos, Permits, Expendable Supplies, etc.)	Cost
Outside Equipment (Drill Rig, Backhoe, Monitoring Equipment, etc.).....	Cost + 15%

PERMITS, FEES AND BONDS

The costs of all permits, fees, and performance bonds required by government agencies are to be paid by the County, unless stated otherwise in an accompanying proposal.

INSURANCE

Geo-Logic Associates, Inc. carries workers' compensation, comprehensive general liability and automobile with policy limits normally acceptable to most clients. The cost for this insurance is covered by the fees listed in this schedule.

<u>SOIL TESTING</u>	<u>TEST METHOD</u>	<u>UNIT RATE</u>
Atterberg Limits (LL, PL, and PI)	D4318	\$150.00/Test
California Bearing Ratio (excluding moisture-density curve)....	D1883	200.00/Point
Chloride Content.....		50.00/Test
Corrosivity Series (resistivity, pH, sulfate, chloride).....		170.00/Test
Consolidation Test (w/o rate data–up to 8 loading increments) D2435	D2435	150.00/Test
Consolidation Test (single point)	D2435	95.00/Test
Consolidation Test Rate Data (per load increment).....	D2435	60.00/each
Direct Shear Test (at natural moisture).....	D3080	65.00/Point
Direct Shear Test (saturated – strain rate 0.0084 inch/min.)	D3080	75.00/Point
Direct Shear Test (saturated recycled- strain rate 0.0084 inch/min)D3080	D3080	120.00/Point
Direct Shear Test (consolidated drained)	D3080	150.00/Point
Direct Shear Test (consolidated drained, residual).....	D3080	200.00/Point
Direct Shear Test (large shear box, 12 x 12).....	D3080	270.00/Point
Expansion Index Test	D4829	125.00/Test
Expansion Index (cement or lime treated sample)	D4829	175.00/Test
Grain-Size Mechanical Analysis: Sand-Clay, w/ Hydrometer ...	D422/D6913	150.00/Test
Grain-Size Mechanical Analysis: Gravel-Clay, w/ Hydrometer. D422/D6913.....	D422/D6913	190.00/Test
Harvard Miniature Compaction Test		235.00/Test
Mechanical Analysis, Percent Passing #200	D1140/C117	75.00/Test
Mechanical Analysis - Sand or Gravel (no wash)	D422/C136	85.00/Test
Mechanical Analysis - Sand and Gravel	D422/C136	155.00/Test
Mechanical Analysis - Sand or Gravel	D422/C136	120.00/Test
Mechanical Analysis - Minus 3" to 200 Sieve, Full Sieve	D422/C136	155.00/Test
Moisture Content	D2216/D4643	16.00/Test
Moisture Density Curve for Compacted Fill (4-inch Mold)	D698	150.00/Test
Moisture Density Curve for Compacted Fill (6-inch Mold)	D698	175.00/Test
Moisture-Density Curve for Compacted Fill (4-inch Mold)	D1557	165.00/Test
Moisture-Density Curve – Compacted Fill (6-inch Mold)	D1557	200.00/Test
Moisture-Density Curve: Lime or Cement Treated (4-inch Mold)....	D1557.....	210.00/Test
Moisture-Density Curve: Lime or Cement Treated (6-inch Mold)....	D1557.....	250.00/Test
Moisture-Density Single Point.....	T272	80.00/Test
Moisture-Density Curve	Cal 216.....	175.00/Test
Organic Matter	D2974	85.00/Test
Permeability (falling head)	CAL220	180.00/Test
Permeability (flexible wall)	D5084	300.00/Test
Permeability (rigid wall- constant head pressure, 2" to 8" mold)....	D2434	250.00/Test
Permeability (rigid wall- constant head pressure, 12" mold)....	D2434	410.00/Test
Permeability (additional consolidation stresses).....		95.00/stage

SOIL TESTING (CONTINUED)	TEST METHOD	UNIT RATE
Permeability (air)	D6539	325.00/Test
Pinhole Dispersion Test; 4 increments (remold sample)	D4647	400.00/Test
Resistance Value	D2844	210.00/Test
Resistance Value – Lime or Cement Treated	D2844/CA301	260.00/Test
Resistivity & pH Test	Cal 532 or 643	90.00/Test
Sand Equivalent	Caltrans 217/D2419	75.00/Test
Soil pH	D4972	20.00/Test
Specific Gravity - Fine-Grained Soils	D854	75.00/Test
Sulfate Content		50.00/Test
Triaxial Compression Test (CD)	D4767 (modified)	575.00/Point
Triaxial Compression Test (CU with pore pressure)	D4767	425.00/Point
Triaxial Compression Test (UU)	D2850	125.00/Test
Triaxial Compression Test [Stage (Progressive) Test; CU]	D4767	1,000.00/Set
Unconfined Compression Test (undisturbed sample)	D2166	90.00/Test
Unit Dry Weight and Moisture Content (undisturbed sample)	D7263/D2216	22.00/Test

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

AGGREGATE TESTING	TEST METHOD	UNIT RATE
Clay Lumps and Friable Particles	C142	\$80.00/Test
Crushed Particles (Fractured Faces)		95.00/Test
Durability Index – Fine	D3744	120.00/Test
Durability Index – Coarse	D3744	140.00/Test
Flat and Elongated Particles	CRD119, 120	105.00/Test
Injurious Organic Matter	C40	60.00/Test
Insoluble Residue in Carbonate Aggregates	D3042	275.00/Test
Lightweight Pieces in Aggregate	C123	95.00/Test
Los Angeles Abrasion Test (500 revolutions)	C131	160.00/Test
Los Angeles Abrasion Test (1000 revolutions)	C535	180.00/Test
Mechanical Analysis - Sand or Gravel (dry sieve)	C136	70.00/Test
Mechanical Analysis (wash 200 sieve)	C117	65.00/Test
Mechanical Analysis (fine with wash 200 sieve)	C136	100.00/Test
Rapid Determination of Carbonate Content of Rock	4373	120.00/Test
Sample Crushing		85.00/Hour
Sand Equivalent	D2419	75.00/Test
Specific Gravity, Bulk, SSD with Absorption	C128/C127	110.00 Each
Sulfate Soundness, per sieve size	C88	135.00/Test

ROCK TESTING	TEST METHOD	UNIT RATE
Density	D7263	\$35.00/Test
Density, Porosity, Specific Gravity, Water Content		110.00/Test
Indirect Tensile Strength (Brazilian), Single Break	D3967	55.00/Test
Indirect Tensile Strength (Brazilian), 10-15 Breaks	D3967	210.00/Test
Point Load Index, Single Break	D5731	35.00/Test
Point Load Index, 10-15 Breaks	D5731	180.00/Test
Rip-Rap (wet / dry, 10 cycles)	D5318	1,000.00/Test
Rip-Rap (freeze / thaw, 10 cycles)	D5312	800.00/Test
Rip-Rap (specific gravity)	D6473	110.00/Test
Rip-Rap Soundness (sodium)	D5240	400.00/Test
Rock Joint Direct Shear		260.00/Point
Rock Joint Direct Shear, additional normal load		95.00/Test

<u>ROCK TESTING (CONTINUED)</u>	<u>TEST METHOD</u>	<u>UNIT RATE</u>
Slake Durability.....	D4644	200.00/Test
Triaxial Compression, with Young's modulus and Poisson's ratio.....		495.00/point
Uniaxial Strength (peak only; 2.5" maximum).....	D7012	130.00/Test
Uniaxial Strength (with stress-strain curve)		call for quote
Uniaxial Strength (with stress-strain curve, add modulus and Poisson ratio).....		call for quote
Rock preparation, cutting, and grinding		85.00/Hour

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

<u>GEOSYNTHETIC MATERIALS</u>	<u>TEST METHOD</u>	<u>UNIT RATE</u>
<i>Seam Coupon Series (thickness, peel, and shear)</i>		
Set of 5 each (Quantity 1-10).....	D6392	\$75.00/Test
Set of 5 each (Quantity 10 or more)	D6392	55.00/Test
Asperity Height	GRI GM12.....	35.00/Test
Liner Puncture Testing up to 350 psi.....		260.00/Test
Liner Puncture Testing over 350 psi.....		410.00/Test

Large Scale Direct Shear (ASTM D5321 and D6321)

Geosynthetic vs Geosynthetic – Method A.....		210.00/Point
Soil vs Geosynthetic Friction – Method B.....		260.00/Point
GCL Internal Shear.....		310.00/Point
Shear Speed (<0.04).....		110.00/Point
(Shear rate dependent on soil drainage characteristics and engineering specifications)		
Substrate Remolding Fee		60.00/Test
Additional Saturation Time (>24 hours)		60.00/Day

GCL Testing

Index Flux Testing	D5887	270.00/Test
Fluid Loss	D5891	75.00/Test
Swell Index	D5890	70.00/Test
Mass per Unit Area	D5993	70.00/Sample
Custom Liner Testing.....		call for quote

All test methods are ASTM unless otherwise noted.

Special sample preparation and laboratory testing not listed above will be charged at applicable personnel rates.

All laboratory test rates are for standard turn-around time and normal reporting procedures. Rush orders will be subject to a 25 percent premium. Manpower requirements or test protocol may preclude the granting of a rush request.

3. PROJECT PRICE

The below project pricing is devised to allow the County the ability to identify costs associated with the frequency of tasks performed in a given calendar year. The Consultant shall be compensated based on the billable hourly rates set forth above to perform the work associated with each task, not to exceed the amounts listed below. Maximum Total Task Price includes fees, travel expenses and reimbursable expenses that are reasonable, necessary and actually incurred by the Consultant in connection with the services. Travel expenses shall be reimbursed in accordance with the County's travel policy.

3.1 A Summary breakdown of the Project fees is as follows

TASK	TASK DESCRIPTION	MAXIMUM TOTAL TASK PRICE
1	Project Management and Meetings	\$37,450
2	Construction Quality Assurance Services	\$160,625
3	Final Certification Report Preparation	\$10,252
PROJECT TOTAL		\$208,327

3.2 Below is a detailed breakdown of the costs for Tasks 1-4:

TASK 1				
Personnel Title	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Project Principal (Supervising Professional)	Hrs	20.00	\$203.00	\$4,060.00
CQA Officer (Senior Professional)	Hrs	180.00	\$178.00	32,040.00
Total Personnel Hrs	Hrs	180.00		
Subtotal Personnel Costs Task 1				\$36,100.00
Equipment and Direct Expenses	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Travel Costs	Each	18.00	\$75.00	\$1,350.00
Subtotal Equipment and Direct Expenses				\$ 1,350.00
TOTAL TASK 1				\$37,450.00

TASK 2				
Personnel Title	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Lead CQA Monitor (Senior Tech) regular time	Hrs	800.00	\$97.00	\$77,600.00
Lead CQA Monitor - overtime*	Hrs	200.00	\$131.00	\$26,200.00
Total Personnel Hrs	Hrs	1000.00		
Subtotal Personnel Costs Task 1				\$103,800.00
Equipment and Direct Expenses	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Personnel/Equipment Mob/demob	Each	1.00	\$250.00	\$250.00
Field Lab Equipment	Weekly	20.00	\$350.00	\$7,000.00
Punch Press/Tensiometer	Weekly	6.00	\$225.00	\$1,350.00
Nuclear Density Gauge	Daily	100.00	\$50.00	\$5,000.00
On-Site Vehicle (Lead CQA Monitor)	Daily	100.00	\$85.00	\$8,500.00
Per Diem (Lead CQA Monitor)	Daily	100.00	\$110.00	\$11,000.00
Leak Location Survey - Dipole Method	lump sum	1.00	\$8,410.00	\$8,410.00
Leak Location Survey - Water Puddle Method	lump sum	1.00	\$8,410.00	\$8,410.00
<i>GCL Conformance Testing</i>				
Index Flux (D5887)	test	7.00	\$180.00	\$1,260.00
Grab Strength (D4632)	test	7.00	\$45.00	\$315.00
Mass Per Unit Area (5993)	test	7.00	\$25.00	\$175.00
In plant sampling and shipping	test	7.00	\$105.00	\$735.00
<i>HDPE Conformance Testing</i>				
Carbon Black Content (D4218 or D1603)	test	7.00	\$25.00	\$175.00
Tensile Strength (D638 or D6693)	test	7.00	\$45.00	\$315.00
Thickness (D5994)	test	7.00	\$15.00	\$105.00
Density (D1505)	test	7.00	\$20.00	\$140.00
Asperity Height (GRI GM12)	test	7.00	\$15.00	\$105.00
Puncture Resistance (D4833)	test	7.00	\$45.00	\$315.00
Tear Resistance (D1004)	test	7.00	\$40.00	\$280.00
In plant sampling and shipping	test	7.00	\$70.00	\$490.00

TASK 2 (CONTINUED)				
<i>Geocomposite Conformance Testing</i>				
Thickness (D5199)	test	2.00	\$15.00	\$30.00
Density (D1505)	test	2.00	\$20.00	\$40.00
Carbon Black Content (D1603)	test	2.00	\$25.00	\$50.00
Routine Trrransmissivity (D4716)	test	4.00	\$80.00	\$320.00
Ply Adhesion (GRI GC7)	test	2.00	\$70.00	\$140.00
In plant sampling and shipping	test	2.00	\$175.00	\$350.00
<i>Geotextile Conformance Testing</i>				
Mass Per Unit Area (D5261)	test	2.00	\$25.00	\$50.00
Grab Strength (D4632)	test	2.00	\$45.00	\$90.00
Permittivity (D4491)	test	2.00	\$80.00	\$160.00
AOS (D4751)	test	2.00	\$95.00	\$190.00
Puncture Resistance (D4833)	test	2.00	\$45.00	\$90.00
In plant sampling and shipping	test	2.00	\$80.00	\$160.00
<i>Drainage Layer/Sump Gravel Material</i>				
Hydraulic Conductivity	test	1.00	\$225.00	\$225.00
<i>Soil Preparation Layer</i>				
Hydraulic Conductivity	test	2.00	\$300.00	\$600.00
Subtotal Equipment and Direct Expenses				\$56,825.00
TOTAL TASK 2				\$160,625.00

*Overtime is defined as every hour over 8 hours per day (40 hours per week) up to 12 hours per day

TASK 3				
Personnel Title	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Project Principal (Supervising Professional)	Hrs	4.00	\$203.00	\$812.00
CQA Officer (Senior Professional)	Hrs	24.00	\$178.00	\$4,272.00
Lead CQA Monitor (Senior Technician)	Hrs	24.00	\$97.00	\$2,328.00
Staff Engineer	Hrs	8.00	\$112.00	\$896.00
Clerk	Hrs	16.00	\$59.00	\$944.00
Total Personnel Hrs	Hrs	76.00		
Subtotal Personnel Costs Task 1				\$9,252.00
Equipment and Direct Expenses	Type of Unit	No. of Units	Rater Per Units	Subtotal Cost (\$)
Report Preparation (reproduction and shipping)	lump sum	1.00	\$1,000.00	\$1,000.00
Subtotal Equipment and Direct Expenses				\$1,000.00
TOTAL TASK 3				\$10,252.00

TOTAL NOT TO EXCEED AMOUNT	\$ 208,327.00
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3.3. Consultant estimates that the scope of work described in Exhibit A shall be completed for a **not-to-exceed cost of \$208,327**. Consultant commits that they can complete the proposed scope of work for this amount. If changes in the scope of work occur, Consultant shall notify the County prior to incurring any additional costs and wait for authorization to proceed.

3.4. The Detailed Cost proposal is based on the following assumptions:

- a. Field Services will be required for 80 working days (approximately 16 weeks).
- b. The Work Schedule shall be 10 hours per day, 5 days per week.
- c. Consultant shall provide a Lead CQA Monitor during the entire construction period.

- d. Regular and overtime hourly rates for the Lead CQA Monitor have been developed based on the most current California Prevailing Wage rate determination.
- e. The office/laboratory is to be provided by the Contractor.
- f. Laboratory testing of material to be performed off site includes conformance testing of the geosynthetics and the hydraulic conductivity testing of the subgrade preparation layer and gravel material. These tests shall be a unit rate cost as shown above.
- g. Quantity of off-site testing required for the geosynthetics is based on the quantity table provided in Addendum No. 1 of RFP 16-46-DQ.
- h. The cost for the leak location surveys has been provided as a lump sum as shown above