

FIRST AMENDMENT TO AGREEMENT FOR ENGINEERING CONSULTANT SERVICES

THIS FIRST AMENDMENT TO CONSULTANT AGREEMENT (Agreement No. 16-445, hereinafter called the "AGREEMENT") is made and entered into this 13th/ day of July/, 2021, by and between the County of Fresno, a political subdivision of the State of California (hereinafter called the "COUNTY") and Geo-Logic Associates, a California Corporation, whose address is 2777 East Guasti Road, Ontario, CA 91761 (hereinafter called the "CONSULTANT").

RECITALS

WHEREAS, COUNTY and CONSULTANT entered into Agreement No. 16-445 (AGREEMENT) on July 12, 2016, pursuant to which CONSULTANT agreed to provide engineering services necessary and to perform Design, Environmental, Geotechnical, Construction Quality Assurance and Construction Management Services for the American Avenue Disposal Site Phase I Clean Closure (PROJECT); and

WHEREAS, the AGREEMENT has been extended twice in writing and is currently set to expire by its terms on July 12, 2021; and

WHEREAS, the PROJECT is not yet complete; and

WHEREAS, it is in the best interest of the COUNTY to retain the services of the CONSULTANT to maintain continuity of the design of the PROJECT; and

NOW, THEREFORE, the CONSULTANT and COUNTY hereby agree to amend the AGREEMENT for the PROJECT, as follows:

- 1. Article IV, Section A of the AGREEMENT is hereby deleted and replaced with the following:
- "A. This First Amendment to the AGREEMENT (AMENDMENT) shall go into effect, retroactive to July 12, 2021. As hereby amended, the term of the AGREEMENT is hereby further extended by an additional three years and therefore shall expire on July 12, 2024, unless prior to its expiration, the term of the AGREEMENT is further extended in writing, for no more than two additional one-year terms, by mutual consent of the Department of Public Works and Planning Director or designee and the CONSULTANT."
 - 2. PROJECT's Schedule (Exhibit C) is hereby amended to include Exhibit C-1,

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attached hereto and incorporated by this reference. All references to Exhibit C throughout the entirety of the AGREEMENT shall be deemed to include to Exhibit C-1.

- 3. CONSULTANT'S PROJECT team (Exhibit B) is hereby amended to include Exhibit B-1, attached hereto and incorporated by this reference. All references to Exhibit B throughout the entirety of the AGREEMENT shall be deemed to include Exhibit B-1.
- 4. CONSULTANT's Fee Schedule (Exhibit E) is hereby amended to include Exhibit E
 1, attached hereto and incorporated by this reference. All references to Exhibit E throughout the entirety of the AGREEMENT shall be deemed to include Exhibit E-1.
- 5. All other provisions, terms, covenants, conditions and provisions contained in the AGREEMENT are unaffected by this First AMENDMENT to the AGREEMENT and shall remain in full force and effect.
- 6. The parties agree that this AMENDMENT may be executed by electronic signature as provided in this section. An "electronic signature" means any symbol or process intended by an individual signing this AMENDMENT to represent their signature, including but not limited to (1) a digital signature; (2) a faxed version of an original handwritten signature; or (3) an electronically scanned and transmitted (for example by PDF document) of a handwritten signature. Each electronic signature affixed or attached to this AMENDMENT (1) is deemed equivalent to a valid original handwritten signature of the person signing this AMENDMENT for all purposes, including but not limited to evidentiary proof in any administrative or judicial proceeding, and (2) has the same force and effect as the valid original handwritten signature of that person. The provisions of this section satisfy the requirements of Civil Code section 1633.5, subdivision (b), in the Uniform Electronic Transaction Act (Civil Code, Division 3, Part 2, Title 2.5, beginning with section 1633.1). Each party using a digital signature represents that it has undertaken and satisfied the requirements of Government Code section 16.5, subdivision (a), paragraphs (1) through (5), and agrees that each other party may rely upon that representation. This AMENDMENT is not conditioned upon the parties conducting the transactions under it by electronic means and either party may sign this AMENDMENT with an original handwritten signature.

1	IN WITNESS WHEREOF, the partie	es have executed this First Amendment to Agreement
2	on the date first set forth above.	
3		1/
4	GEO-LOGIC ASSOCIATES, INC.	COUNTY OF FRESHO
5	Ricole Sweetland Lor	
6	Gary Lass, President 2777 East Guasti Road	Steve Brandau, Chairman of the Board of Supervisors of the County of Fresno
7	Ontario, CA 91761	
8		ATTEST: Bernice E. Seidel
9		Clerk of the Board of Supervisors County of Fresno, State of California
10		
11		BY: Rei Cunt
12		Deputy
13	FOR ACCOUNTING USE ONLY	
14	Org No 9026 Account No. 7295	
15	Fund No. 0700 Subclass No. 15000	
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EXHIBIT B-1

Geo-Logic Associates Proposed Staff American Avenue Disposal Site, Phase I Waste Relocation County of Fresno, Agreement No. 16-445

Name/Role	Year's Experience	Professional Registrations	Education	Billing Level	Hourly Billing Rate
Gary Lass, Principal-in-Charge	40+	PG CA #3653 CEG CA #1093 GHG CA #18	M.S., Geochemistry - CA State University, Los Angeles B.S., Geology - CA State University, Los Angeles	PRINCIPAL II	\$265
Frank (Ben) Dell-Era, Construction Manager	27	NICET Level II, GRI 40 HR HAZWOPER ACI Level I Concrete, Nuclear Gauge		TECHNICIAN IV	\$140
Jacob Russell, Supervising Engineer	21	PE CA #64512	B.S., Environmental Resource Engineering - Humboldt State University	SUPERVISING PROFESSIONAL	\$210
Sean Flores, Project Engineer	18	PE CA #39161 PG CA #9422	B.S., Geological Engineering, University of Nevada, Reno	PROJECT PROFESSIONAL II	\$163
Stephanie Hamilton, Project Engineer	11	PE CA #47957	B.S., Civil Engineering, San Jose State University	PROJECT PROFESSIONAL II	\$163
Aaron Ogorzalek, Project Geotechnical Engineer	17	PE CA #71852	M.S., Geotechnical/ Geoenvironmental Engineering, Colorado State University B.S., Civil Engineering, University of Missouri- Rolla	PROJECT PROFESSIONAL III	\$184
Bryan Fritzler, Principal Technician	29	PE CA #55568	B.S., Civil Engineering, Colorado State University	PRINCIPAL TECHNICIAN	\$165
Neven Matasovic, Sr. Reviewer, Seismic Characterization	32	PE CA #55861 GE CA #2557	Ph.D., Geotechnical Engineering, University of California at Los Angeles M.S., Geotechnical Engineering, University of Zagreb, Croatia B.S., Civil Engineering, University of Croatia	PRINCIPAL PROFESSIONAL I	\$242
Gabe Iltis, Geotechnical	11	EIT OR #74401EIT	Ph.D., Environmental Engineering - Oregon	PROJECT PROFESSIONAL II	\$163

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Name/Role	Year's Experience	Professional Registrations	Education	Billing Level	Hourly Billing Rate
Engineer		40 HR HAZWOPER	State University M.S., Civil Engineering, Colorado State University B.S., Environmental Engineering, Oregon State University		
Courtney Barrett, Sr. Project Engineer	15	PE CA #78076	B.S., Civil and Environmental, University of California, Davis	SENIOR PROFESSIONAL I	\$196
Ryan Berquist, Sr. Engineer/Designer	10	PE CA #77538	B.S., Mechanical Engineering, University of California, Santa Barbara	PROJECT PROFESSIONAL I	\$142
Noah Campbell, Stormwater Designer	20	PE CA #64963	B.S., Environmental Resource Engineering, Humboldt State University	SENIOR PROFESSIONAL I	\$196
Monte Christie, Sr. Geotechnical Engineer	26	PE CA #58866 GE CA #2630	M.S., Geotechnical Engineering, University of California, Berkeley B.S., Civil Engineering, University of California, Berkeley B.A., Environmental Studies, University of California, Santa Cruz	SUPERVISING PROFESSIONAL	\$210
John Hower, Sr. Reviewer, Project Manager	30	PG CA #6524 CEG CA #2142	B.S., Geology, California State University, Long Beach	PRINCIPAL I	\$242
Jordan Graham, Staff Engineer	3	PE CA #91799 PE UT #11741591 40 HR HAZWOPER Nuclear Gauge	B.S., Civil Engineering, University of California, Davis	STAFF PROFESSIONAL II	\$115
Nathan Droivold, Staff Engineer	2	EIT CA #158685 40 HR HAZWOPER Nuclear Gauge	B.S., Civil Engineering, Loyola Marymount University	STAFF PROFESSIONAL III	\$126
Vittoria Zucchelli, Staff Engineer	4	EIT	B.S., Civil Engineering, University of Florida, Tampa	STAFF PROFESSIONAL II	<mark>\$115</mark>
Caleb Miller, Sr. Project Engineer	10	PE California #77424 PE Arizona 11973	B.S., Civil Engineering, California State University, Chico	SENIOR PROFESSIONAL I	\$196
Richard Mitchell, Sr.	37	PG CA #4390	M.S., Geotechnical Engineering / Engineering	PRINCIPAL PROFESSIONAL	\$242

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Name/Role	Year's Experience	Professional Registrations	Education	Billing Level	Hourly Billing Rate
Reviewer/Regulatory Liaison		CEG CA #1371	Geology, University of California, Berkeley B.S. Geology, California State University, Chico		
Erik Olhoffer, Sr. CQA Monitor	24	40 HR HAZWOPER NICET Cert Level I Nuclear Gauge ACI Concrete – Level I #561454521		TECHNICIAN II	\$98
Jason Heffner, Project Geotechnical Engineer	17	PE CA #71122 PE NV #22563 PE OR #80232	B.S., Geological Engineering - University of NV, Reno	PROJECT PROFESSIONAL I	\$142
Robert Valceschini, ET Cover Specialist	32	PE CA # 50522	M.S., Civil & Geotechnical Engineering, University of Nevada, Reno B.S., Geological Engineering, Mackay School of Mines, University of Nevada, Reno	PRINCIPAL PROFESSIONAL	\$242
Francesca Senes, Staff Geologist	1		B.S., Earth Science - Northeastern Illinois University M.S., Geology - California State University, San Jose	STAFF PROFESSIONAL II	\$115
Ryan Day, Staff Engineer	<u>1</u>	EIT 40-HR HAZWOPER	B.S., Civil Engineering – California State University, Chico	STAFF PROFESSIONAL II	<mark>\$115</mark>
Alejandro, Valadez, Staff Engineer	2	40-HR HAZWOPER MSHA Nuclear Gauge	B.S., Civil Engineering – California State University, Chico	STAFF PROFESSIONAL II	<mark>\$115</mark>
Matthew Needs, Staff Engineer	2	GIT 40-HR HAZWOPER Nuclear Gauge	B.S., Geological Engineering – University of Nevada, Reno	STAFF PROFESSIONAL II	<mark>\$115</mark>
David Harich, PE, Sr. Reviewer	<mark>30+</mark>	PE CA # 53287	MBA, University of California, San Diego BS, Civil Engineering, California State Polytechnic University, Pomona	PRINCIPAL PROFESSIONAL I	<mark>\$242</mark>

Newly added staff is highlighted

Staff removed: Michael Yacyshyn (Principal I), David Romo (Sr. Professional II), Nathan Droivold (Staff Professional III), Tyler Kurtz (Staff Professional II) Removed staff may still appear on future invoices for work completed, but not yet billed

Geo-Logic

Vittoria Zucchelli, EIT

Staff Engineer



EDUCATION

BS, Civil Engineering, 2016 University of South Florida

PROFESSIONAL REGISTRATIONS

Engineer-in-Training, Georgia, No. EIT027010

CERTIFICATIONS

40-HR HAZOPER, 2016

PROFESSIONAL AFFILIATIONS

Solid Waste Association of North America, 2016-2020

Ms. Zucchelli is a Staff Engineer in Geo-Logic who is experienced in environmental and solid waste engineering experience with a specialty in landfill gas (LFG) projects involving system design, construction, and regulatory compliance. Her experience includes Title V Reporting, Title V Permit Renewal, New Source Performance Standards (NSPS) Regulations, Gas Collection and Control System (GCCS) design, Tier 2 landfill gas sampling, and construction quality assurance (CQA). Examples of her project experience include the following:

GCCS) Expansion Designs and Construction Engineering Services, RS and Advanced Disposal Services (ADS), Various Locations (Listed Below)

- Evaluated existing LFG collection coverages based on radiuses of influence for LFG extraction wells, surface emission exceedance locations, and recommendations from the OM&M personnel to design LFG extraction wells to maintain or increase gas collection coverages in areas of the landfill.
- Evaluated liquid level and depth to bottom measurements and wellhead monitoring data for existing LFG extraction wells to determine whether a well would need to be replaced/redrilled or would require a pump due to regulatory or operational concerns.
- Designed LFG extraction well depths and materials specifications based on surveyed ground surface elevations and landfill top of protective cover, subgrade, or top of clay layer elevations.
- Designed LFG collection (header/lateral), air supply, and liquid conveyance piping in order to meet and improve landfill gas operational needs and capabilities.
- Evaluated predicted LFG collection flows and condensate generation to size and evaluate condensate management systems.
- Provided cost estimates to be able to keep clients informed based on budgetary requirements.
- Assessed OM&M and site specific needs and recommendations to design GCCS components that were more durable and sustainable.
- Reviewed shop drawings and specifications provided by construction contractors to meet the requirements and intentions of the designs.
- Provided construction management services to provide guidance on the design specifications and intentions and troubleshoot design/field issues that occurred during construction with contractors and CQA personnel.
- Projects included (Client, Project Name, Location):
- ADS, Cedar Hill Landfill, GCCS Improvements, Ragland, Alabama
- ADS, Eagle Point Landfill, GCCS Design, Ball Ground, Georgia
- ADS, Eagle Point Landfill, Q1-Q4 GCCS Design, Ball Ground, Georgia

Vittoria Zucchelli, EIT





- ADS, Eagle Point Landfill, GCCS Segregation, 18-Inch Header, Flare Relocation, 36-Inch Header, Lift
 Station and Dual-Contained Forcemain Design, Ball Ground, Georgia
- ADS, East Baton Rouge Parish North Landfill, GCCS Design, Baton Rouge, Louisiana
- ADS, Evergreen Landfill, GCCS Improvements, Valdosta, Georgia
- RS, Hickory Ridge Landfill, GCCS Design and Construction Engineering Services, Conley, Georgia
- ADS, Star Ridge Landfill, GCCS Improvements, Moody, Alabama
- ADS, Star Ridge Landfill, GCCS Design and Flare Installation, Moody, Alabama
- ADS, Stone's Throw Landfill, GCCS Improvements, Moody, Alabama
- ADS, Wolf Creek Landfill, GCCS Design, Dry Branch, Georgia
- ADS, Wolf Creek Landfill, GCCS Improvements, Dry Branch, Georgia
- ADS, Wolf Creek Landfill, GCCS Design and Construction Engineering Services, Dry Branch, Georgia
- RS, Oak Grove Landfill GCCS Design, Winder, Georgia
- RS, Oak Grove Landfill, GCCS Design and Construction Engineering Services, Winder, Georgia
- RS, Pine Ridge Landfill, GCCS Design, Griffin, Georgia
- RS, Pine Ridge Landfill Dewatering System Design, Griffin, Georgia
- RS, Pineview Landfill, GCCS Design, Dora, Alabama
- RS, Pineview Landfill, GCCS Design and Construction Engineering Services, Dora, Alabama
- RS, Richland Creek Landfill, GCCS Design, Buford, Georgia
- RS, Richland Creek Landfill, GCCS Design and Construction Engineering Services, Buford, Georgia

Five-Year GCCS Phasing Plans, RS, Various Sites

- Prepared GCCS phasing plan drawing sets for future conditions of landfills based on projected landfill waste filling, landfill gas flow rates, and liquids removal rates. Drawings included projected LFG extraction wells, gas collection, air supply, and liquid conveyance piping, abandonments, and other capital expenditures that would be required to meet regulatory and operational requirements.
- Prepared material and engineering cost estimations to provide to clients to allow them to evaluate their budgetary needs for particular years and to project future landfill gas construction project needs.

Sites included:

- RS, Oak Grove Landfill, Winder, Georgia
- RS, Pine Ridge Landfill, Griffin, Georgia
- RS, Pineview Landfill, Dora, Alabama
- RS, Richland Creek Landfill, Buford, Georgia

Publications and Presentations

Zucchelli, V. 2019. Vertical Extraction Wells: From Past to Present. Presented at Alabama + Georgia Joint Spring 2019 SWANA Conference. Sponsored by SCS Engineers. April 2, 2019.

Ryan Day, EIT

Staff Engineer



EDUCATION

Bachelor of Science, Civil Engineering, 2020 California State University, Chico

CERTIFICATIONS

Engineer-in-Training, CA

40-Hr HAZWOPER

PROFESSIONAL TRAINING

AutoCAD and Civil3D

Mr. Day is a recent graduate in Civil Engineering from Chico State University in Chico, California. While attending the University, he interned for the City of Walnut Creek, California. While there, he worked for both the traffic and capital improvement disisions, where he utilized his AutoCAD Civil 3D skills and provided roadway design, traffic analysis, drainage engineering, and other tasks.

Kiefer Landfill Module 4, Phase 1, Sacramento County, Sacramento, California

Provided engineering and CAD support during the construction phase of the project. Prepared drain pipe CAD drawings for seep locations found during contruction. Reviewed specifications to assure testing compliance.

Ostrom Road Compost Pad, Recology Ostrom Road, Wheatland, California Provided CQA support for the compost pad construction. Performed on-site testing of cement treated base.

Ash Monofill Stage O, Regional Disposal Company, Roosevelt, Washington Provided engineering and CAD support for the design of the Stage O area of the Ash Monofill. Prepared CAD drawings and quantity calculations.

Circle Green Compost Facility, Phelan Pinon Hills Community Services District, San Bernardino County, California

Provided CAD and engineering support for the design of the Circle Green Compost Facility. Preparded CAD drawings and preparded the technical report.

Oliveira Compost Facility, Oliveira Enterprises Inc., Byron, California Provided CAD and engineering support for the design of the Oliveira Compost Facility. Preparded CAD drawings and preparded the technical report.

American Avenue Disposal Site, County of Fresno, Kerman, California Provided CAD and engineering support for the clean closure design of the American Avenue Disposal Site. Prepared CAD drawings and quantity calculations.

Alejandro Valadez

Staff Engineer





EDUCATION

B.S., Civil Engineering, 2019 California State Univ., Chico

PROFESSIONAL AFFILIATIONS

Latinos in Technical Engineers (LTC)

MAES Latinos in Science and Engineering

National Society of Leadership and Success (NSLS)

CERTIFICATIONS

OSHA Hazardous Waste Operations and Emergency Response Training (40-Hour)

U.S. Department of Labor Mine Safety and Health Administration (24-Hour)

Nuclear Gauge Density Testing (ASTM - 6938)

Mr. Valadez is a graduate of California State University, Chico, and holds a Bachelor's Degree in Civil Engineering. He has performed a variety of engineering and field tasks since he was hired by GLA shortly after graduation. He provides design support in AutoCAD 3D software and assists with a variety of engineering tasks such as quantity calculations and grading plans. He has experience providing engineering support for construction projects, construction quality assurance, and has spent time performing laboratory tests in GLA's geotechnical laboratory. He supervised workshops as a STEM volunteer (Science, Technology, Engineering, and Mathematics), and was a part of the MAES Leadership Academy. Mr. Valadez is bilingual in English and Spanish.

American Avenue Disposal Site Phase I Clean Closure, Fresno, California Provided engineering and CAD support for the design of Phase 1 Waste Relocation. Prepared PS&E design documents including detail design drawings and the waste relocation work plan and figures for the Phase 1 Waste Relocation.

Johnson Canyon Landfill Module VII Expansion and Compost Pad, Gonzales, California

Provided engineering and CAD support for subgrade and fill grading plans including earthwork calculations for Master Plan. Grading included subgrade, fill waste, access roads, sumps, leachate collection pipes, ditches, and benches. Also provided support for a leak detection survey by the water puddle method in accordance with ASTM D7002.

Kiefer Landfill, Sacramento, California

Provided engineering support for a leak detection survey on slopes by the water puddle method in accordance to ASTM D7002.

Casmalia Superfund Site, Santa Barbara, California

Provided engineering and CAD support for the design of Casmalia Superfund Site Central Drainage Area Cap. Provided grading plans by preparing plan drawings using as-builts.

Florin Perkins Public Disposal Site, Sacramento, California

Provided support for a hydrologic analysis for this closed site. Peformed hydrology calculations utilizing the TR-55 method.

East Otay Mesa Landfill Facility, San Diego County, California

Provided engineering and CAD support for the conceptual design of East Otay Mesa Recycling Collection Center and Facility Landfill. Prepared a drawing set for a Report of Compost Site Information.

Alejandro Valadez

Staff Engineer



Washington County Landfill Phase 4D Conceptual Design, Washington City, Utah

Prepared design drawings for Phase 4D conceptual design at the landfill.

Yolo County Landfill, Woodland. California

Utilizied Civil 3D to perform volume analysis between topographic and proposed grading surfaces to provide options for reducing soil volume in a compost pad.

Recology Ostrom Organics Compost Facility, Yuba County, California

Performed nuclear gauge desity testing for soil and gravel compaction as a part-time CQA on-site.

Buttonwillow Landfill, Buttonwillow, California

Provided support in vadose zone monitoring and performed continuity testing.

Neal Road Landfill, Paradise, California

Provided engineering support for a leak detection survey by the dipole method in accordance to ASTM D7007-16.

South Campus Neighborhood Project, The City of Chico, Chico, CA

Produced a proposal with a final report of a safety improvement plan for existing road conditions to satisfy Caltrans Standards. Responsibilities included:

- Surveying exisiting street conditions.
- Assisting in traffic and speed counts.
- Using AutoCAD to create cross sections and details.
- Estimating project budget.
- Cooperating with professionals and professors to find better solutions.
- Preparing presentation for professionals and professors.
- Writting reports.

Project ultimately proposed ideas for the City of Chico to improve the safety of existing streets located near school campus.

Matthew Needs, QISP

Staff Engineer



EDUCATION

B.S. Geological Engineering, 2019, University of Nevada, Reno

PROFESSIONAL Training

AutoCad and Civil 3D gINT – Geotechnical Software

CERTIFICATIONS

Qualified Industrial Stormwater Practitioner (QISP) #01775

40-Hr HAZWOPER

CalGeo Loss Prevention

Mr. Needs is a graduate of University of Nevada-Reno who began his career with Geo-Logic Associates in 2017 an intern. He has now transitioned into a Staff Engineer role in GLA's Granite Bay, California office. He has worked in the design of solid waste landfills, construction quality control of landfills, conducting groundwater sampling and other field work, as well as conducting ASTM standard geotechnical laboratory tests. He started his geotechnical engineering career providing laboratory and design support for open pit mining operations in Nevada. He has experience with liner system applications including HDPE, GCL, clay, admix soils, geonet, geotextile, and granular drainage materials. In addition to CQA monitoring of landfill construction, Mr. Needs assists with the creation of design and detail drawings for solid waste and composting facilities.

Module 4 Excavation CQA, Sacramento County, Kiefer Landfill

Matthew performed CQA services for the 24 million cubic yard excavation at Kiefer Landfill and provided real-time geotechnical recommendations to aid the contractor in selectively stockpiling excavation soils for future purposes. He also provided CQA services for a sliver fill located within the cell and conducted associated compaction and permeability testing, as well as ensured that the fill and stockpiles met project specifications.

Module 5/13 Separation Liner CQA, Placer County, Western Regional Landfill

Mr. Needs provided CQA services during subgrade preparation for the installation of the Module 5/13 liner system. This included reviewing project submittals, earthworks testing and sampling, working with the contractor to confirm existing conditions, as well as maintaining a testing catalog that met the requirements of the project specific specifications.

Phase XX Liner Construction CQA, Republic Services, Ox Mountain Landfill Mr. Needs provided CQA services for the entirety of the Phase XX construction at Ox Mountain Landfill. Responsibilities included monitoring, testing, and sampling during the following activities; rock excavation and associated earthfill, soil mixture during production of low permeability soil from an on-site pug mill, earthworks construction, geosynthetics installation, upgrade and installation of stormwater control systems, and collection piping installation.

Phase 4 Liquid Mitigation CQA, Republic Services, Newby Island Landfill As part of the continuing Liquid Mitigation projects at Newby Island Landfill Matthew provided CQA services for the deep soil mixture processes during Phase 4; tasks included logging core of the intermixed concrete and waste cylinders to ensure they would comply with project specifications for strength testing.

Matthew Needs





Ostrom Road Landfill Compost Pad Permeability, Recology, Ostrom Road Landfill

CQA monitor for the construction of the Ostrom Road Compost Pad, Matthew provided testing services and documentation during construction of subgrade and two retention ponds.

Casmalia CDA Cap and Area 3 Closure Design, Casmalia Steering Committee, Casmalia Hazardous Waste Landfill

Mr. Needs provided engineering and CAD support for the design of the Casmalia CDA Cap and Area 3 Closure.

1F-2F Cell Design, Republic Services, Wasatch Landfill

Prepared design drawings for Phase IF/2EFcell expansion at the landfill. Utilized AutoCad Civil 3D to develop cell grading, perform quantity take-offs and volume analyses between topographic surfaces and develop detail drawings. Mr. Needs also assisted in developing project specifications for the project.

Ariel Budget Models, Republic Services

Mr. Needs assisted in creating aerial budget models for a multitude of landfill operations. He utilized AutoCad Civil 3D to develop surfaces and determine quantities.

Preliminary Closure/Post-Closure Maintenance Plan (PCPCMP), Waste Management, Asuza Landfill Mr. Needs created landfill surfaces and determined quantities between phased development and final closure grades in order to develop life of landfill estimates.

Regional Sanitary SSBS and DLDS WDR Compliance, Sacramento County, Sacramento Regional Wastewater Treatment Plant

Mr. Needs installed and replaced Matric Water Potential sensors at the Sacramento Regional Wastewater Treatment plan as part of GLA's involvement with confirming that the site is complying with site-specific WDRs.

East Otay Mesa Landfill JTD Groundwater Sampling, East Otay Mesa Landfill and Recycling, East Otay Mesa In support of the development of the site JTD, Mr. Needs assisted in the benchmark groundwater sampling for the site.

Additional Professional Training

OSHA Hazardous Waste Operations and Emergency Response Training (40-Hour), CalGeo Loss Prevention Training, First Aid and CPR Certified.

David Harich, PE

Principal Engineer





EDUCATION

MBA, University of California, San Diego, 1999

BS, Civil Engineering, California State Polytechnic University, Pomona, 1990

PROFESSIONAL REGISTRATIONS

Professional Engineer, California, No. C53287

PROFESSIONAL AFFILIATIONS

General A & C57 contractor's license

Waste water collections operator - CWEA

Water treatment & distribution operator - CDPH

Member United States Environmental Training Institute

Won 1987 CIWMB award for "Best Large Volume Recycler at a Landfill or Transfer Station"

Director for Temescal Valley Water District

Mr. Harich has 30 years of experience of domestic and international experience in solid waste disposal operations, engineering, construction management and groundwater development. Results-oriented leader with excellent skills in negotiating, communicating, and developing cost effective solutions for engineering projects and disposal operations. Bilingual with many years' experience in public speaking and presentations with state and local governments.

Waste Management Inc., Corona, California

As Senior District Manager from 2014 to 2020, Mr. Harich managed the El Sobrante Landfill with over \$100 million in annual revenue, 70,000 tons per week of Municipal Solid Waste, and general oversight of 45 employees. Provide leadership and cross-functional management for all departments including Site Operations, Engineering, Landfill Gas Operations, Environmental Compliance, Public Relations, Fleet Maintenance and Wildlife Habitat Conservation. Oversee pricing, cost controls, and regulatory compliance.

Key Achievements:

- Developed one of the largest solid waste landfills in the country and grew revenue from \$60 million to \$103 million in five years.
- Introduced new surveying tools to improve operational efficiency.
- Negotiated Collective Bargaining Agreement with Union.
- Renegotiated operating permit with County Lead Agency.
- Developed and launched Southern California Heavy Equipment Rodeo competition.

Republic Services, San Antonio, Texas

As the Environmental Manager from 2013 to 2014, Mr. Harich managed the Engineering and Environmental Compliance for six regional South Texas landfills. Responsible for capital budget, new construction of landfill cells and landfill gas collection systems. Worked with Texas Commission on Environmental Quality (TCEQ) for permitting oilfield waste.

Key Achievements:

- Developed new method for on-site handling of Oil Exploration and Production waste saving millions in landfill airspace consumption.
- Managed new landfill cell construction capital budget and construction quality control at several landfills.
- Collaborated on landfill closure design and remediation at two landfills.

Harich Enterprises Company, Inc. Running Springs, California

As the President and CEO from 1999 to 2013, Mr. Harich created his own well drilling construction company. Bid on public works projects for municipal supply and agricultural production wells. Managed payables and receivables. Created asset allocation strategies. Designed pump development and aquifer yield programs. Drilled monitoring wells on several southern California

David Harich, PE





landfills. Served one year as General Manager for Arrowbear Park County Water District.

Key Achievements:

- Created company and grew revenue from \$0 to \$6million in ten years.
- Completed projects for residential commercial water supply.
- Completed temporary water supply project for \$2 billion expansion at 29 Palms Marine Corps. Base.

Waste Management Inc., Latin America

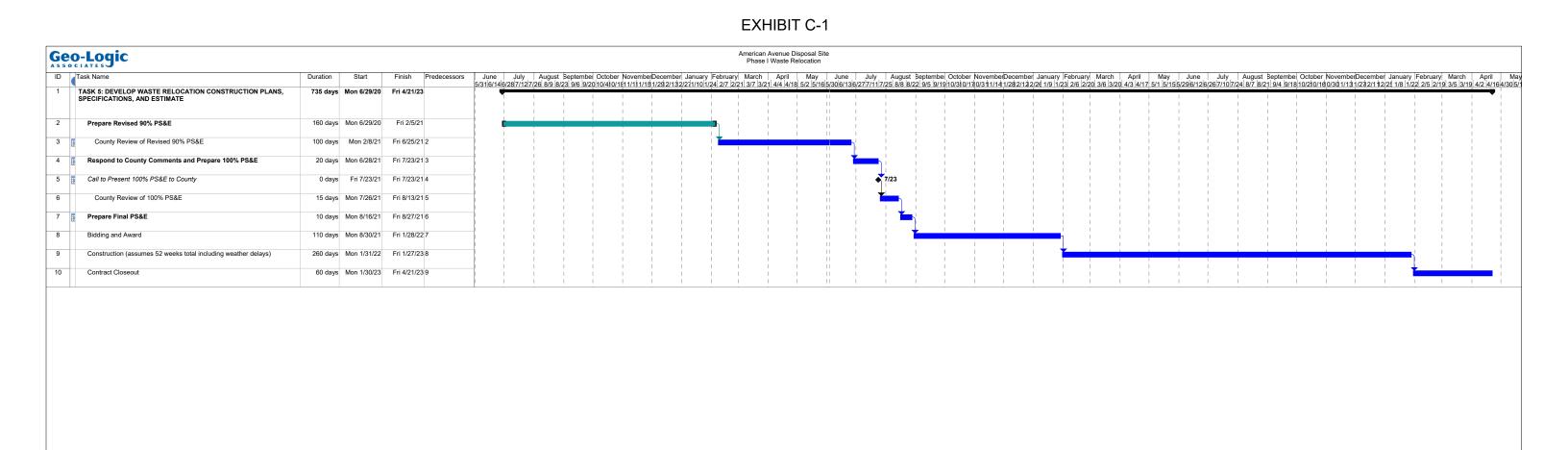
As the Latin American Landfill Manager from 1994 – 1999, he managed four solid waste landfills for Waste Management in Latin America. Developed team of people and trained them in proper landfilling techniques including cut and cover, compaction, landfill gas collection, leachate collection, and storm water collection. Developed new landfill in Acapulco, Mexico from conception. Conducted business negotiations with local and state governments and regulators. Created and implemented budgets for all sites.

Key Achievements:

- Closed several burn dumps as requested by local governments.
- Designed Tijuana Landfill and trained site personnel on operations.
- Gave presentations to State and Local governments on proper solid waste management.
- Received award from United States Environmental Training Institute.

Bryan A. Stirrat and Associates, Diamond Bar, California

As Project Engineer from 1990 – 1994, he developed and designed new cell construction, GCCS systems, LCRS systems, composite liner systems, and closure systems. Performed field engineering tasks and construction management on existing landfills. Developed new technique for preparing cut slopes for geotextile and HDPE liners systems.



External Tasks

External Milestone

Deadline

Manual Summary

Start-only

Finish-only Page 1

Project: Draft AADS Schedule Task 5_7_R2_060 Date: Fri 6/4/21

Milestone

Summary

External Tasks

Project Summary

External Milestone

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup 🔷



FRESNO COUNTY 2019 & 2020 FEE SCHEDULE

PROFESSIONAL STAFF	UNIT RATE
Staff Professional I	
Staff Professional II	
Staff Professional III	•
Project Professional I	
Project Professional II	
Project Professional III	
Senior Professional I	
Supervising Professional/Senior Professional II	•
Principal Professional I	
Principal Professional II	-
Court Appearance (Expert Witness, Deposition, etc.; four-hour minimum)	
	Z X Houriyhate
FIELD/LABORATORY STAFF	
Technician I	· · · · · · · · · · · · · · · · · · ·
Technician II	•
Technician III (or Minimum Prevailing Wage)	
Technician IV	
Laboratory Manager	
Principal Technician	165.00/Hour
CADD/GIS	
CADD/GIS/Database Manager I	100.00/Hour
CADD/GIS/Database Manager II	
CADD Designer	
GIS Specialist	
•	,
SUPPORT STAFF Administrative Assistant I	90 00/Hour
Administrative Assistant I	•
Technical Editor	•
Senior Technical Editor	
Senior recriffical Editor	126.00/Hour
*Overtime Premium is 35% of PERSONNEL CHARGE	
EQUIPMENT CHARGES	
BAT Permeameter	200.00/Dav
Compaction Testing Equipment & Supplies	
Peel & Shear Strength Apparatus (FML Seams)	
Portable Laboratory (8' x 32' trailer) with equipment	
Portable Laboratory (mobilization / demobilization)	
ReMi/Refraction Seismograph	
Sealed Single Ring Infiltrometer (SSRI)	
Sealed Double Ring Infiltrometer (SDRI)	
Slope Inclinometer	
	,
EXPENSES Valida Usa for Field Sarvisas	14.00/Hour or 220.00/wash
Vehicle Use for Field Services	
Soil Sampling Equipment & Drilling Supplies	
Groundwater Sampling Equipment and Supplies	
Per Diem	
Outside Services (Consultants, Surveys, Chemical lab Tests, etc.)	
Reimbursables (Maps, Photos, Permits, Expendable Supplies, etc.)	
Outside Equipment (Drill Rig, Backhoe, Monitoring Equipment, etc.)	



PERMITS, FEES AND BONDS

The costs of all permits, fees, and performance bonds required by government agencies are to be paid by the Client, 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. Cost of any special insurance required by the Client, including increases in policy limits, adding additional insured parties and waivers of subrogation, are charged at cost plus 15%. Unless otherwise stated, such charges are in addition to the estimated or maximum charges stated in any accompanying proposal.

TERMS

Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. Past due accounts are subject to a finance charge of one and one-half percent (1-1/2%) per month, or the maximum rate allowed by law.

PROPOSAL PERIOD

Unless otherwise stated, a proposal accompanying this schedule is effective for sixty (60) days. If authorization to proceed is not received within this period, Geo-Logic Associates, Inc. reserves the right to renegotiate the fee.



FRESNO COUNTY 2019 & 2020 FEE SCHEDULE

Atterberg Limits (LL, PL, and PJ)	SOIL TESTING	TEST METHOD	UNIT RATE
Chloride Content			
Corrosivity Series (resistivity, pH, sulfate, chloride)	• , • ,		•
Consolidation Test (without rate data – up to 8 loading increments). D2435			
Consolidation Test (single point)			•
Consolidation Test Rate Data (per load increment) D2435 60.00/each Direct Shear Test (st artural 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 .120.00/Point Direct Shear Test (consolidated drained) D3080 .120.00/Point Direct Shear Test (consolidated drained) D3080 .200.00/Point Direct Shear Test (consolidated drained, residual) D3080 .200.00/Point Direct Shear Test (large shear box, 12 x 12) D3080 .300.00/Point Expansion Index Test D4829 .175.00/Test Expansion Index (cement or lime treated sample) D4829 .175.00/Test Grain-Size Mechanical Analysis - Sand-Clay, including Hydrometer D422/D6913/D7928 .150.00/Test Grain-Size Mechanical Analysis - Gravel-Clay, including Hydrometer D422/D6913/D7928 .150.00/Test Harvard Miniature Compaction Test .250.00/Test Mechanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 .85.00/Test Mechanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 .85.00/Test Mechanical Analysis - Sand or Gravel .020 Sieve, Full Sieve D422/D6913/C136 .155.00/Test Mechanical Analysis - Minus 3" to 200 Sieve, Full Sieve D422/D6913/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 (4-inch Mold) D1557 .200.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .200.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .250.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .250.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .250.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .250.00/Test Moisture-Density Curve - Lime or Cement Treated (4-inch Mold) D1557 .250.00/Test Moisture-Density Curve - Lime or Cement			
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 .120.00/Point Direct Shear Test (consolidated drained) D3080 .200.00/Point Direct Shear Test (large shear box, 12 x 12) D3080 .300.00/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, including Hydrometer D422/D6913/D7928 .200.00/Test Grain-Size Mechanical Analysis - Sand rolaysis - Gravel-Clay, including Hydrometer D422/D6913/D7928 .200.00/Test Hachanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 .85.00/Test Mechanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 .85.00/Test Mechanical Analysis - Sand or Gravel D422/D6913/C136 .155.00/Test Mechanical Analysis - Sand or Gravel D422/D6913/C136 .155.00/Test Mechanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 .155.00/Test Mechanical Ana			
Direct Shear Test (saturated – strain rate 0.0084 inch/min.)			
Direct Shear Test (saturated, recycled – strain rate 0.0084 inch/min.)D3080			
Direct Shear Test (consolidated drained)			
Direct Shear Test (consolidated drained, residual)			•
Direct Shear Test (large shear box, 12 x 12) D3080 300.00/Point Expansion Index Test D4829 125.00/Test Expansion Index (cement or lime treated sample) D4829 175.00/Test Expansion Index (cement or lime treated sample) D4829 175.00/Test Grain-Size Mechanical Analysis - Sand-Clay, including Hydrometer D422/D6913/D7928 150.00/Test Grain-Size Mechanical Analysis - Gravel-Clay, including Hydrometer D422/D6913/D7928 200.00/Test Harvard Miniature Compaction Test D422/D6913/D7928 200.00/Test Harvard Miniature Compaction Test D422/D6913/D7928 200.00/Test Hachanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 250.00/Test Mechanical Analysis - Sand or Gravel (no wash) D422/D6913/C136 155.00/Test Mechanical Analysis - Sand or Gravel D422/D6913/C136 120.00/Test Mechanical Analysis - Sand or Gravel D422/D6913/C136 120.00/Test Mechanical Analysis - Vando Gravel D422/D6913/C136 155.00/Test Moisture Content D422/D6913/C136 155.00/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 - Compacted Fill (6-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 210.00/Test Moisture-Density Curve - Lime or Cement Treated (6-inch Mold) D1557 210.00/Test Moisture-Density Curve - Lime or Cement Treated (6-inch Mold) D1557 210.00/Test Moisture-Density Curve - Lime or Cement Treated (6-inch Mold) D1557 250.00/Test Permeability (figid wall - constant head pressure, 2" to 8" mold) D2434 300.00/Test Permeability (figid wall - constant head pressure, 2" to 8" mold) D2434 300.00/Test Permeability (figid wall - constant head pressure, 2" to 8" mold) D2434 300.00/Test Permeab			
Expansion Index Test Expansion Index (cement or lime treated sample) D4829			
Expansion Index (cement or lime treated sample)			
Grain-Size Mechanical Analysis - Sand-Clay, including Hydrometer	Expansion Index Test	D4829	125.00/Test
Grain-Size Mechanical Analysis - Gravel-Clay, including Hydrometer	Expansion Index (cement or lime treated sample)	D4829	175.00/Test
Harvard Miniature Compaction Test Mechanical Analysis, Percent Passing #200	Grain-Size Mechanical Analysis - Sand-Clay, including Hydrometer	D422/D6913/D7928	150.00/Test
Mechanical Analysis , Percent Passing #200	Grain-Size Mechanical Analysis - Gravel-Clay, including Hydrometer	D422/D6913/D7928	200.00/Test
Mechanical Analysis - Sand or Gravel (no wash)	Harvard Miniature Compaction Test		250.00/Test
Mechanical Analysis - Sand and GravelD422/D6913/C136155.00/TestMechanical Analysis - Sand or GravelD422/D6913/C136120.00/TestMechanical Analysis - Minus 3" to 200 Sieve, Full SieveD422/D6913/C136155.00/TestMoisture ContentD2216/D464316.00/TestMoisture Density Curve for Compacted Fill (4-inch Mold)D698150.00/TestMoisture Density Curve for Compacted Fill (6-inch Mold)D698175.00/TestMoisture-Density Curve for Compacted Fill (6-inch Mold)D1557165.00/TestMoisture-Density Curve - Compacted Fill (6-inch Mold)D1557200.00/TestMoisture-Density Curve - Lime or Cement Treated (4-inch Mold)D1557210.00/TestMoisture-Density Curve - Lime or Cement Treated (6-inch Mold)D1557250.00/TestMoisture-Density Single PointT27280.00/TestMoisture-Density CurveCal 216175.00/TestOrganic MatterD297485.00/TestPermeability (falling head)CAL220180.00/TestPermeability (flexible wall)D5084300.00/TestPermeability (rigid wall - constant head pressure, 2" to 8" mold)D2434300.00/TestPermeability (additional consolidation stresses)95.00/stagePermeability (additional consolidation stresses)95.00/stagePermeability (air)D6539325.00/TestPinhole Dispersion Test; 4 increments (remold sample)D4647400.00/TestResistance ValueD2844210.00/TestResistance Value – Lime or Cement TreatedD2844/CA301260.00/Test	Mechanical Analysis, Percent Passing #200	D1140/C117	75.00/Test
Mechanical Analysis - Sand or Gravel	Mechanical Analysis - Sand or Gravel (no wash)	D422/D6913/C136	85.00/Test
Mechanical Analysis - Minus 3" to 200 Sieve, Full Sieve D422/D6913/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 (6-inch Mold) D1557 L65.00/Test Moisture-Density Curve - Compacted Fill (4-inch Mold) D1557 200.00/Test Moisture-Density Curve - Compacted Fill (6-inch Mold) D1557 210.00/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 - Call 216 175.00/Test Moisture-Density Curve - D2974 85.00/Test Permeability (flating head) CAL20 180.00/Test Permeability (flating head) CAL20 180.00/Test Permeability (frigid wall - constant head pressure, 2" to 8" mold) D2434 300.00/Test Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) 95.00/stage Permeability (additional consolidation stresses) 95.00/stage Permeability (additional consolidation stresses) D6539 325.00/Test Pinhole Dispersion Test; 4 increments (remold sample) D4647 400.00/Test Resistance Value Lime or Cement Treated D2844/CA301 260.00/Test Resistance Value Lime or Cement Treated D2844/CA301 260.00/Test Sand Equivalent Caltrans 217/D2419 75.00/Test Soil pH Test Cal 532 or 643 90.00/Test Soil pH Test Cal 532 or 643 90.00/Test Soil pH Test Caltrans 217/D2419 75.00/Test Soil pH Test Specific Gravity - Fine-Grained Soils D854 75.00/Test Specific Gravity - Fine-Grained Soils	Mechanical Analysis - Sand and Gravel	D422/D6913/C136	155.00/Test
Moisture Content Moisture Density Curve for Compacted Fill (4-inch Mold) Moisture Density Curve for Compacted Fill (4-inch Mold) Moisture Density Curve for Compacted Fill (6-inch Mold) Moisture-Density Curve for Compacted Fill (6-inch Mold) Moisture-Density Curve for Compacted Fill (6-inch Mold) Moisture-Density Curve — Compacted Fill (6-inch Mold) Moisture-Density Curve — Lime or Cement Treated (4-inch Mold) Moisture-Density Curve — Lime or Cement Treated (6-inch Mold) Moisture-Density Curve — Lime or Cement Treated (6-inch Mold) Moisture-Density Single Point Moisture-Density Single Point Moisture-Density Single Point Moisture-Density Curve Moisture-Density Single Point Moi	Mechanical Analysis - Sand or Gravel	D422/D6913/C136	120.00/Test
Moisture Density Curve for Compacted Fill (4-inch Mold) Deg8 150.00/Test Moisture Density Curve for Compacted Fill (6-inch Mold) Deg8 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 460.00/Test Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) Permeability (additional consolidation stresses) 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 Soil pH D4972 20.00/Test Specific Gravity - Fine-Grained Soils D854 75.00/Test	Mechanical Analysis - Minus 3" to 200 Sieve, Full Sieve	D422/D6913/C136	155.00/Test
Moisture Density Curve for Compacted Fill (6-inch Mold) 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 (figid wall - constant head pressure, 2" to 8" mold) D2434 300.00/Test Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) Permeability (air) D6539 325.00/Test Permeability (air) D6539 325.00/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 Soil pH D4972 20.00/Test Specific Gravity - Fine-Grained Soils D854 75.00/Test	Moisture Content	D2216/D4643	16.00/Test
Moisture-Density Curve for Compacted Fill (4-inch Mold)	Moisture Density Curve for Compacted Fill (4-inch Mold)	D698	150.00/Test
Moisture-Density Curve for Compacted Fill (4-inch Mold)	Moisture Density Curve for Compacted Fill (6-inch Mold)	D698	175.00/Test
Moisture-Density Curve – Lime or Cement Treated (4-inch Mold) D1557			
Moisture-Density Curve – Lime or Cement Treated (4-inch Mold) D1557	Moisture-Density Curve – Compacted Fill (6-inch Mold)	D1557	200.00/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 300.00/Test Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) Permeability (air) D6539 325.00/Test Pinhole Dispersion Test; 4 increments (remold sample) D4647 A00.00/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 Specific Gravity - Fine-Grained Soils D854 75.00/Test			
Moisture-Density Single Point			
Moisture-Density Curve			
Permeability (falling head)	Moisture-Density Curve	Cal 216	175.00/Test
Permeability (falling head)	Organic Matter	D2974	85.00/Test
Permeability (rigid wall - constant head pressure, 2" to 8" mold) D2434 Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) Permeability (additional consolidation stresses) 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 Specific Gravity - Fine-Grained Soils D854 75.00/Test	<u> </u>		•
Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) 95.00/stage 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	Permeability (flexible wall)	D5084	300.00/Test
Permeability (rigid wall - constant head pressure, 12" mold) D2434 460.00/Test Permeability (additional consolidation stresses) 95.00/stage 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	···		•
Permeability (additional consolidation stresses)			
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			
Pinhole Dispersion Test; 4 increments (remold sample) 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			
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			
Resistance Value – Lime or Cement Treated			
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			·
Sand Equivalent Caltrans 217/D2419 75.00/Test Soil pH D4972 20.00/Test Specific Gravity - Fine-Grained Soils D854 75.00/Test		•	•
Soil pH			
Specific Gravity - Fine-Grained Soils			



SOIL TESTING (continued)	TEST METHOD	UNIT RATE
Triaxial Compression Test (CD)	D7181	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.



FRESNO COUNTY 2019 & 2020 FEE SCHEDULE

AGGREGATE TESTING	TEST METHOD	UNIT RATE
Clay Lumps and Friable Particles		
Crushed Particles (Fractured Faces)		
Durability Index – Fine		
Durability Index – Coarse		•
Flat and Elongated Particles		
Injurious Organic Matter		· ·
Insoluble Residue in Carbonate Aggregates		
Lightweight Pieces in Aggregate		
Los Angeles Abrasion Test (500 revolutions)		
Los Angeles Abrasion Test (1000 revolutions)		
Mechanical Analysis - Sand or Gravel (dry sieve)		
Mechanical Analysis (wash 200 sieve)		
Mechanical Analysis (fine with wash 200 sieve)		· ·
Rapid Determination of Carbonate Content of Rock		· ·
Sample Crushing		
Sand Equivalent		
Specific Gravity, Bulk, SSD with Absorption		•
Sulfate Soundness, per sieve size		
, , , , , , , , , , , , , , , , , , , ,		
ROCK TESTING	TEST METHOD	UNIT RATE
Density	D7263	\$35.00/Test
Density Density, Porosity, Specific Gravity, Water Content	D7263	\$35.00/Test 110.00/Test
Density Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break	D7263	\$35.00/Test 110.00/Test 55.00/Test
Density Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks	D7263 D3967 D3967	\$35.00/Test 110.00/Test 55.00/Test 210.00/Test
Density Density, Porosity, Specific Gravity, Water Content	D7263	\$35.00/Test 110.00/Test 55.00/Test 210.00/Test 35.00/Test
Density Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks Point Load Index, Single Break Point Load Index, 10-15 Breaks	D7263	\$35.00/Test 55.00/Test 210.00/Test 35.00/Test 180.00/Test
Density Density, Porosity, Specific Gravity, Water Content	D7263	\$35.00/Test 55.00/Test 210.00/Test 35.00/Test 180.00/Test 1,000.00/Test
Density	D7263	\$35.00/Test 55.00/Test 210.00/Test 35.00/Test 180.00/Test 1,000.00/Test 800.00/Test
Density	D7263	\$35.00/Test 55.00/Test 210.00/Test 35.00/Test 180.00/Test 1,000.00/Test 800.00/Test 810.00/Test
Density	D7263	\$35.00/Test 55.00/Test 210.00/Test 35.00/Test 180.00/Test 1,000.00/Test 800.00/Test 800.00/Test 400.00/Test
Density	D7263	\$35.00/Test 55.00/Test 55.00/Test 35.00/Test 180.00/Test 1,000.00/Test 800.00/Test 10.00/Test 400.00/Test 260.00/Point
Density	D7263	\$35.00/Test 55.00/Test 55.00/Test 35.00/Test 180.00/Test 1,000.00/Test 800.00/Test 1000/Test 400.00/Test 400.00/Test 260.00/Point 95.00/Test
Density. Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks Point Load Index, Single Break Point Load Index, 10-15 Breaks Rip-Rap (wet / dry, 10 cycles) Rip-Rap (freeze / thaw, 10 cycles) Rip-Rap (specific gravity) Rip-Rap Soundness (sodium) Rock Joint Direct Shear Rock Joint Direct Shear, additional normal load Slake Durability.	D7263	\$35.00/Test \$55.00/Test \$55.00/Test \$35.00/Test \$180.00/Test \$1,000.00/Test \$800.00/Test \$10.00/Test \$10.00/Test \$260.00/Point \$50.00/Test \$200.00/Test
Density	D7263	\$35.00/Test \$35.00/Test \$5.00/Test \$5.00/Test \$10.00/Test \$1000.00/Test \$800.00/Test \$10.00/Test \$10.00/Test \$260.00/Point \$5.00/Test \$95.00/Test \$495.00/point
Density. Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks Point Load Index, Single Break Point Load Index, 10-15 Breaks Rip-Rap (wet / dry, 10 cycles) Rip-Rap (freeze / thaw, 10 cycles) Rip-Rap (specific gravity) Rip-Rap Soundness (sodium) Rock Joint Direct Shear Rock Joint Direct Shear, additional normal load Slake Durability Triaxial Compression, with Young's modulus and Poisson's ratio Uniaxial Strength (peak only; 2.5" maximum)	D7263	\$35.00/Test \$10.00/Test \$5.00/Test \$5.00/Test \$10.00/Test \$1000.00/Test \$800.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test \$10.00/Test
Density. Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks. Point Load Index, Single Break Point Load Index, 10-15 Breaks Rip-Rap (wet / dry, 10 cycles) Rip-Rap (freeze / thaw, 10 cycles) Rip-Rap (specific gravity) Rip-Rap Soundness (sodium) Rock Joint Direct Shear Rock Joint Direct Shear, additional normal load Slake Durability. Triaxial Compression, with Young's modulus and Poisson's ratio Uniaxial Strength (peak only; 2.5" maximum). Uniaxial Strength (with stress-strain curve).	D7263	\$35.00/Test\$10.00/Test\$5.00/Test\$55.00/Test\$10.00/Test\$10.00/Test\$800.00/Test\$10.00/Test\$10.00/Test\$260.00/Point\$95.00/Test\$200.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test
Density. Density, Porosity, Specific Gravity, Water Content Indirect Tensile Strength (Brazilian), Single Break Indirect Tensile Strength (Brazilian), 10-15 Breaks Point Load Index, Single Break Point Load Index, 10-15 Breaks Rip-Rap (wet / dry, 10 cycles) Rip-Rap (freeze / thaw, 10 cycles) Rip-Rap (specific gravity) Rip-Rap Soundness (sodium) Rock Joint Direct Shear Rock Joint Direct Shear, additional normal load Slake Durability Triaxial Compression, with Young's modulus and Poisson's ratio Uniaxial Strength (peak only; 2.5" maximum)	D7263	\$35.00/Test\$10.00/Test\$5.00/Test\$5.00/Test\$35.00/Test\$180.00/Test\$800.00/Test\$800.00/Test\$400.00/Test\$260.00/Point\$95.00/Test\$200.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/Test\$10.00/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.



FRESNO COUNTY 2019 & 2020 FEE SCHEDULE

GEOSYNTHETIC MATERIALS	TEST METHOD	UNIT RATE
Seam Coupon Series (thickness, peel, and shear)		
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		
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		
GCL Internal Shear		310.00/Point
Shear Speed (<0.04)		110.00/Point
(Shear rate dependent on soil drainage characteristics and engineer	ing 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		
Swell Index	D5890	70.00/Test
Mass per Unit Area	D5993	70.00/Sample
Custom Liner Testing		

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