Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

June 18, 2018
Proposal No. 08SJO02-00708

Mr. Dan Zaich
Director of Strategic Initiatives
San Rafael City Schools
310 Nova Albion Way
San Rafael, California 94903

Subject: Proposal for Geotechnical Observation and Testing Services, and Soil Sampling and Waste Classification Services
San Pedro Elementary School
498 Point San Pedro Road, San Rafael, California 94901

Dear Mr. Zaich:

In accordance with your request, we are pleased to submit this cost proposal for Geotechnical Observation and Testing and Soil Sampling and Waste Classification services for the San Pedro Elementary School improvements project in San Rafael, California. This proposal includes cost estimates based on the request of Ms. Teri Mathers of Cumming Corporation, the construction manager for the project. Please note that construction plans and schedules were not made available to us at the time this proposal was prepared.

The purpose of our services will be to provide you with geotechnical field and laboratory data and information in order to assess compliance with the project plans and specifications. Included in this proposal is a discussion of our understanding of the project, the scope of services we can provide, and associated fees.

PROJECT UNDERSTANDING

We understand that this project includes construction of new classroom buildings and necessary utility infrastructure. It is our understanding that the initial phase of our services will involve geotechnical observation and testing of utility trench installation and backfill operations. Our services will also include analytical testing of trench spoils for export.

PROPOSED SCOPE OF SERVICES

Task 1 – Geotechnical Observation and Testing Services

- Observe site preparation, excavation, and removal of unsuitable materials.
- Observe prepared subgrade and foundation excavations for conformance with geotechnical recommendations and design assumptions.
- Observe placement and compaction of subgrade, fill and aggregate base material.
- Perform soil sample pick up and transport them back to our laboratory for Proctor density testing.
- Perform field density tests to evaluate compaction of subgrade, fill, aggregate base for utilities, and sidewalk areas.
- Prepare daily field reports describing the work observed with a summary of the results of field tests performed.
- Compile, review, and distribute progress report including field and laboratory test data.
- Provide interim and final verified reports at the project's closeout.

Task 2 – Soil Sampling and Waste Classification

In accordance with the California Department of Toxic Substances Control (DTSC) Information Advisory – Clean Imported Fill Material, one (1) soil sample will be collected from the soil at the site using hand held equipment. The sample will be collected in a glass jar, stored in a cooler with ice, and transported to a California certified analytical laboratory under chain of custody documentation via courier. Based on our understanding of the proposed construction and our experience with similar projects, we propose to provide the following scope of services:

- Provide project management to include client liaison, work scheduling, quality review, and semi-monthly distribution of test data and daily field inspection reports.
- Coordinate inspections and testing requests with the project inspector.
- Perform soil sampling for waste classification. The soil will be analyzed for the following parameters:
    - Volatile organic compounds (VOCs) and Total petroleum hydrocarbons (TPH) as gasoline using EPA Method 8260B.
    - Semi-volatile organic compounds (SVOCs) using EPA Method 8270C.
    - Organochlorine pesticides (OCPs) using EPA Method 8081.
    - Polychlorinated biphenyls (PCBs) using EPA Method 8082.
    - TPH as diesel and motor oil using EPA Method 8015B/8021.
    - Asbestos using EPA Method 600/R-93-116.
    - Chromium VI using EPA Method 7199.
    - Title 22 Metals by EPA Method 6010.

- Due to the potential for metals reported above Title 22 waste characterization guidelines, a waste extraction test (WET) and Toxicity Characteristic Leaching Procedure (TLCP) for solubility analysis will be conducted for lead and chromium on the sample.
- Following the completion of field activities and receipt of laboratory analysis, a brief correspondence describing the sample results, as well as Ninyo & Moore's recommended waste classification for the soil will be submitted along with the laboratory analytical report.
- Observe site preparation, excavation, and removal of unsuitable materials.
- Observe prepared subgrade and foundation excavations for conformance with geotechnical recommendations and design assumptions.
- Observe placement and compaction of subgrade, fill and aggregate base material.
- Perform soil sample pick up and transport them back to our laboratory for proctor density testing.
- Perform field density tests to evaluate compaction of subgrade, fill, aggregate base for utilities, and sidewalk areas.
- Prepare daily field reports describing the work observed with a summary of the results of field tests performed.
- Compile, review, and distribute progress report including field and laboratory test data.
- Provide interim and final verified reports at the project's closeout.

ASSUMPTIONS

- Site access for soil sampling will be arranged by Cumming Corporation.
- Once mobilized to the site for field work, no delays or work stoppages beyond the control of Ninyo & Moore will occur.
- Laboratory turn-around-time will be three business days.
- If additional analyses are requested by the receiving property or facility, a separate agreement may be prepared between San Rafael City Schools and Ninyo & Moore to cover any additional costs.
- Our services will be scheduled and coordinated by the client or their appointed representative.
- The contractor and subcontractors will maintain a 40-hour work week during normal daytime work hours. Weekend, holiday, and overtime work has not been included in this cost proposal.
- Our services are subject to California prevailing wage law.
- Field Technician and special inspector rates are based on a 4-hour minimum for the first 4 hours and an 8-hour minimum for hours exceeding 4 hours. Show up time will be charged as 2-hour minimum. Field personnel are charged portal to portal from our San Jose office.
- Shoring, waterproofing, materials testing and special inspection services are not included in the cost estimate.
- Services that are not included will be provided upon the District's written request based on the attached fee schedule.

FEE ESTIMATE

We propose to perform the scope of services described above, subject to the listed assumptions, on a not to exceed and time-and-materials basis in accordance with the attached Schedule of Fees. A summary of our estimated fee per task is presented below:

Summary of Estimated Fees		
Task No.	**Services**	**Estimated Fees**
1	Geotechnical Observation and Testing Services	$15,000
2	Soil Sampling & Waste Classification	$4,173
	Total Estimated Fee	**$19,173**

Our proposed not to exceed and time-and-materials fee estimate for geotechnical observation and testing services (Task 1) is **$15,000 (Fifteen Thousand Dollars)**. Should the construction schedule require a lesser or greater amount of services than that estimated herein, the cost will vary accordingly. The actual cost of our services will depend largely on the requested site visits for our services, as well as impact of weather and work stoppages, all of which are beyond our control.

Our proposed time-and-materials fee estimate for soil sampling and waste classification of utility trench spoils (Task 2) is **$4,173 (Four Thousand One Hundred and Seventy-Three Dollars)**. Actual costs of these services will be dependent upon the amount (volume in cubic yards) of material to be tested and additional testing requested by others that are not listed in our scope. The quoted price is for one sampling event and testing of up to 100 cubic yards of material.

We will provide services on an as-needed basis and will require 24 hours' notice for scheduling inspection and testing visits. We sincerely appreciate the opportunity to submit this proposal, and look forward to working with you on this project.

Respectfully submitted,
NINYO & MOORE

David C. Seymour
Principal Engineering Geologist

DCS/slt

Attachment: Schedule of Fees (PRJ 1324)

Schedule of Fees

Hourly Charges for Personnel

Principal Engineer/Geologist/Environmental Scientist	$ 155
Senior Engineer/Geologist/Environmental Scientist	$ 150
Senior Project Engineer/Geologist/Environmental Scientist	$ 140
Project Engineer/Geologist/Environmental Scientist	$ 133
Senior Staff Engineer/Geologist/Environmental Scientist	$ 120
Staff Engineer/Geologist/Environmental Scientist	$ 110
GIS Analyst	$ 105
Field Operations Manager	$ 105
Supervisory Technician	$ 100
Nondestructive Examination Technician, UT, MT, LP	$ 95
ACI Concrete Technician	$ 85
Concrete/Asphalt Batch Plant Inspector	$ 85
Special Inspector (Concrete, Masonry, Steel, Welding, and Fireproofing)	$ 85
Senior Field/Laboratory Technician	$ 85
Field/Laboratory Technician	$ 85
Technical Illustrator/CAD Operator	$ 80
Information Specialist	$ 80
Data Processing, Technical Editing, or Reproduction	$ 85

Other Charges

Concrete Coring Equipment (includes one technician)	$ 175/hr
PID/FID Usage	$ 120/day
Anchor load test equipment (includes technician)	$ 89/hr
Hand Auger Equipment	$ 55/day
Inclinometer Usage	$ 32/hr
Vapor Emission Kits	$ 30/kit
Level D Personal Protective Equipment (per person per day)	$ 25/p/d
Rebar Locator (Pachometer)	$ 22/hr
Nuclear Density Gauge Usage	$ 12/hr
Field Vehicle Usage	$ 10/hr
Direct Project Expenses	Cost plus 15 %

Laboratory testing, geophysical equipment, and other special equipment provided upon request.

Notes

For field and laboratory technicians and special inspectors, regular hourly rates are charged during normal weekday construction hours. Overtime rates at 1.5 times the regular rates will be charged for work performed outside normal construction hours and all day on Saturdays. Rates at twice the regular rates will be charged for all work in excess of 12 hours in one day or on Sundays and holidays. Lead time for any requested service is 24 hours. Field Technician rates are based on a 4-hour minimum. Special inspection rates are based on a 4-hour minimum for the first 4 hours and an 8-hour minimum for hours exceeding 4 hours. Field personnel are charged portal to portal.

Invoices will be submitted monthly and are due upon receipt. A service charge of 1.0 percent per month may be charged on accounts not paid within 30 days.

The terms and conditions of providing our consulting services include our limitation of liability and indemnities as presented in Ninyo & Moore's Work Authorization and Agreement.

Schedule of Fees for Laboratory Testing

Laboratory Test, Test Designation, and Price Per Test

SOILS

Atterberg Limits, D 4318, CT 204	$ 180
California Bearing Ratio (CBR), D 1883	$ 440
Chloride and Sulfate Content, CT 417 & CT 422	$ 135
Consolidation, D 2435, CT 219	$ 275
Consolidation – Time Rate, D 2435, CT 219	$ 70
Direct Shear – Remolded, D 3080	$ 290
Direct Shear – Undisturbed, D 3080	$ 250
Durability Index, CT 229	$ 150
Expansion Index, D 4829, UBC 18-2	$ 240
Expansion Potential (Method A), D 4546	$ 180
Expansive Pressure (Method C), D 4546	$ 180
Geofabric Tensile and Elongation Test, D 4632	$ 165
Hydraulic Conductivity, D 5084	$ 300
Hydrometer Analysis, D 422, CT 203	$ 190
Moisture, Ash, & Organic Matter of Peat/Organic Soils	$ 110
Moisture Only, D 2216, CT 226	$ 30
Moisture and Density, D 2937	$ 50
Permeability, CH, D 2434, CT 220	$ 290
pH and Resistivity, CT 643	$ 160
Proctor Density D 1557, D 698, CT 216, & AASHTO T-180 (Rock corrections add $80)	$ 260
R-value, D 2844, CT 301	$ 425
Sand Equivalent, D 2419, CT 217	$ 110
Sieve Analysis, D 422, CT 202	$ 110
Sieve Analysis, 200 Wash, D 1140, CT 202	$ 90
Specific Gravity, D 854	$ 200
Triaxial Shear, C.D, D 4767, T 297	$ 390
Triaxial Shear, C.U., w/pore pressure, D 4767, T 2297 per pt.	$ 330
Triaxial Shear, C.U., w/o pore pressure, D 4767, T 2297 per pt.	$ 190
Triaxial Shear, U.U., D 2850	$ 140
Unconfined Compression, D 2166, T 208	$ 100
Wax Density, D 1188	$ 90

ROOFING

Built-up Roofing, cut-out samples, D 2829	$ 165
Roofing Materials Analysis, D 2829	$ 500
Roofing Tile Absorption, (set of 5), UBC 15-5	$ 190
Roofing Tile Strength Test, (set of 5), UBC 15-5	$ 190

MASONRY

Brick Absorption, 24-hour submersion, C 67	$ 45
Brick Absorption, 5-hour boiling, C 67	$ 55
Brick Absorption, 7-day, C 67	$ 60
Brick Compression Test, C 67	$ 45
Brick Efflorescence, C 67	$ 45
Brick Modulus of Rupture, C 67	$ 40
Brick Moisture as received, C 67	$ 35
Brick Saturation Coefficient, C 67	$ 50
Concrete Block Compression Test, 8x8x16, C 140	$ 60
Concrete Block Conformance Package, C 90	$ 1100
Concrete Block Linear Shrinkage, C 426	$ 120
Concrete Block Unit Weight and Absorption, C 140	$ 55
Cores, Compression or Shear Bond, CA Code	$ 85
Masonry Grout, 3x3x6 prism compression, UBC 21-18	$ 30
Masonry Mortar, 2x4 cylinder compression, UBC 21-16	$ 30
Masonry Prism, half size, compression, UBC 21-17	$ 180

CONCRETE

Cement Analysis Chemical and Physical, C 109	$ 1,650
Compression Tests, 6x12 Cylinder, C 39	$ 30
Concrete Mix Design Review, Job Spec	$ 140
Concrete Mix Design, per Trial Batch, 6 cylinder, ACI	$ 750
Concrete Cores, Compression (excludes sampling), C 42	$ 55
Drying Shrinkage, C 157	$ 250
Flexural Test, C 78	$ 100
Flexural Test, C 293	$ 55
Flexural Test, CT 523	$ 100
Gunite/Shotcrete, Panels, 3 cut cores per panel and test, ACI	$ 250
Jobsite Testing Laboratory	Quote
Lightweight Concrete Fill, Compression, C 495	$ 55
Petrographic Analysis, C 856	$ 1,100
Splitting Tensile Strength, C 496	$ 80

REINFORCING AND STRUCTURAL STEEL

Fireproofing Density Test, UBC 7-6	$ 70
Hardness Test, Rockwell, A-370	$ 80
High Strength Bolt, Nut & Washer Conformance, set, A-32	$ 205
Mechanically Spliced Reinforcing Tensile Test, ACI	$ 95
Pre-Stress Strand (7 wire), A 416	$ 140
Chemical Analysis, A-36, A-615	$ 120
Reinforcing Tensile or Bend up to No. 11, A 615 & A 706	
No. 8 Rebar	$ 55
No. 11 Rebar	$ 75
No. 18 Rebar	$ 150
Structural Steel Tensile Test: Up to 200,000 lbs. (machining extra), A 370	$ 105
Welded Reinforcing Tensile Test: Up to No. 11 bars, ACI	$ 80
Tensile Test for Fiberwrap (ASTM D-3039)	$ 675

ASPHALT CONCRETE

Asphalt Mix Design, Caltrans	$ 2,200
Asphalt Mix Design Review, Job Spec	$ 150
Extraction, % Asphalt, including Gradation, D 2172, CT 310	$ 215
Film Stripping, CT 302	$ 100
Hveem Stability and Unit Weight CTM or ASTM, CT 366	$ 195
Marshall Stability, Flow and Unit Weight, T-245	$ 215
Maximum Theoretical Unit Weight, D 2041	$ 120
Swell, CT 305	$ 165
Unit Weight sample or core, D 2726, CT 308	$ 90

AGGREGATES

Absorption, Coarse, C 127	$ 35
Absorption, Fine, C 128	$ 35
Clay Lumps and Friable Particles, C 142	$ 100
Cleanness Value, CT 227	$ 160
Crushed Particles, CT 205	$ 140
Durability, Coarse, CT 229	$ 165
Durability, Fine, CT 229	$ 165
Los Angeles Abrasion, C 131 or C 535	$ 180
Mortar making properties of fine aggregate, C 87	$ 275
Organic Impurities, C 40	$ 55
Potential Reactivity of Aggregate (Chemical Method), C 289	$ 390
Sand Equivalent, CT 217	$ 90
Sieve Analysis, Coarse Aggregate, C 136	$ 125
Sieve Analysis, Fine Aggregate (including wash), C 136	$ 125
Sodium Sulfate Soundness (per size fraction), C 88	$ 160
Specific Gravity, Coarse, C 127	$ 75
Specific Gravity, Fine, C 128	$ 110

Special preparation of standard test specimens will be charged at the technician's hourly rate.
Ninyo & Moore is accredited to perform the AASHTO equivalent of many ASTM test procedures.