

March 30, 2018  
Proposal No. 04-01791

Mr. Michael Otavka  
Director of Facilities  
William S. Hart Union High School District  
21380 Centre Pointe Parkway  
Santa Clarita, California 91350

Subject: Proposal for Geotechnical, Materials Testing, and Inspection Services  
Sierra Vista Junior High School Modular Container Classroom Addition Project  
William S. Hart Union High School District  
Canyon Country, California  
Division of State Architect (DSA) Application No. 03-117759

Dear Mr. Otavka:

Ninyo & Moore is pleased to submit this cost proposal for geotechnical, materials testing and specialty inspection services during the construction of the Sierra Vista Junior High School Modular Container Classroom Addition project located at 19425 Stillmore Street in Canyon Country, California. Ninyo & Moore is currently providing in-plant inspection and specialty inspections services for the modular container construction at the GrowthPoint fabrication facility in Carson, California. Therefore, we are very familiar with the project requirements. New modular container buildings will serve as classrooms, storage spaces, restrooms, and office space. We have prepared this proposal based on our review of the project plans, specifications, Statement of Structural Tests and Inspections (DSA 103) and our experience on similar projects. Other improvements include new shade structures, American with Disabilities Act (ADA) compliant accessible ramps, asphalt-concrete (AC) and Portland cement concrete (PCC) pavements, curbs, site utilities, and new landscaping. Based on our review of the project DSA-103 form, project plans, and specifications, our anticipated scope of services will include inspection and testing of soils, concrete, shotcrete, structural steel, high-strength bolting, and post-installed anchors. Structurally, the new modular buildings will be founded on reinforced concrete continuous footings and stem walls. Earthwork for the new buildings and site improvements will be performed in accordance with the project geotechnical and geological engineering investigation report prepared by Koury Engineering and Testing, Inc., dated October 28, 2016 (Project No. 16-0548).

## SCOPE OF SERVICES

Based on our understanding of the proposed construction and our experience with similar projects, we propose to provide the following scope of services:

### Project Coordination and Technical Support

- Project coordination, technical support, and management, including review of the project plans and specifications, distribution of test reports, and work scheduling.
- Regular distribution of tests and DSA interim and final verified reports in accordance with new DSA guidelines, 2013 California Administrative Code and DSA Construction Oversight Process (PR 13-01) requirements.
- Attendance at pre-construction meetings and as-needed field meetings.

### Geotechnical Services

- Field Engineer/Geologist support for inspection of foundation excavations and remedial removal bottoms and to provide written recommendations, if needed.
- Field Technician Services for observation and testing during temporary excavations, trench backfill, structure backfill, subgrade preparation and during aggregate base placement. Field density test will be performed to evaluate the contractor's compaction efforts.
- Laboratory testing, including proctor density and sand equivalent testing of soils and aggregates sampled in the field.
- Preparation of daily reports, test data sheets and field memoranda to document the items inspected.
- Preparation and submittal of the Geotechnical Interim and Final Verified Reports (DSA-293).

### Inspection and Materials Testing Services

- Field technician services for sampling and testing of concrete, including checking slump, temperature, and casting a set of cylinders for each batch.
- Field technician services for concrete batch plant inspection at the production plant including checking mix design and batch weights and signing each delivery ticket.
- Field technician services for sampling, tagging, and testing of construction materials, such as reinforcing steel, anchor bolts, and high strength bolts and washers.
- Welding and bolting inspection services in the field and at the fabrication plant in accordance with the project specifications.
- Non-destructive examination of welds in accordance with the project specifications in the field and at the fabrication plant.
- Post-installed anchor installation inspection services in the field.
- Load and/or torque testing of post-installed anchors including epoxy and expansion anchors.
- Specialty inspection services during shotcrete placement, including sampling and testing of concrete. Shotcrete will be sampled and tested in accordance with the project specifications.

- Preparation of progress reports, concrete test data sheets, and field memoranda to document the items inspected.
- Laboratory testing, including bend and tensile testing on rebar, conformance testing of high strength bolts, and compressive strength testing of concrete and shotcrete cores, sampled in the field.
- Preparation and submittal of the Laboratory Interim and Final Verified Reports (DSA-291).

## ASSUMPTIONS

Based on the construction schedule described above and our project understanding, the following assumptions have been made in the preparation of our scope of services:

- Our services will be scheduled and coordinated by the Project Inspector or Construction Manager on an as-needed basis.
- Inspection of concrete placement and CIDH pile rebar cages will be performed by the project inspector.
- Our services are subject to prevailing wage requirements.
- Our estimated fee is based on the assumptions outlined above and does not include stand-by time or costs associated with retesting or reinspecting materials that were found not to be in compliance with the project plans or specifications. Our services will depend on the construction schedule and the contractor's operations. Hours spent that exceed those in the attached tables will be billed on a time-and-materials basis.

## ESTIMATED FEE

We propose to provide our services on a time-and-materials basis in accordance with the attached Schedule of Fees and Schedule of Fees for Laboratory Testing. Our estimated fee for the scope of services described herein is presented in the attached Table 1.

Ninyo & Moore appreciates the opportunity to provide services on this project and we look forward to working with you.

Respectfully submitted,  
**NINYO & MOORE**



Rajindra S. Handapangoda, PE, GE  
Senior Engineer

RAH/AR/sc

Attachments: Table 1 – Breakdown of Estimated Fee  
Schedule of Fees

Distribution: (1) Addressee (via e-mail)



Alfredo "Tino" Rodriguez  
Principal, Construction Services

**Table 1 - Breakdown of Estimated Fee****Field Services**

Field Technician/Inspector				
Footing/CIDH Pile Excavation Inspection	80 hours	@	\$ 92.00 /hour	\$ 7,360.00
Trench and Structure Backfill	48 hours	@	\$ 92.00 /hour	\$ 4,416.00
Subgrade and Aggregate Base Preparation	64 hours	@	\$ 92.00 /hour	\$ 5,888.00
Concrete Sampling and Testing	60 hours	@	\$ 98.00 /hour	\$ 5,880.00
Concrete Batch Plant Inspection	60 hours	@	\$ 98.00 /hour	\$ 5,880.00
Welding and Bolting Inspector (Field and Shop)	128 hours	@	\$ 98.00 /hour	\$ 12,544.00
Non-Destructive Testing (Welds)	32 hours	@	\$ 98.00 /hour	\$ 3,136.00
Specialty Shotcrete Inspector	40 hours	@	\$ 98.00 /hour	\$ 3,920.00
Shotcrete Core Sampling	16 hours	@	\$ 160.00 /hour	\$ 2,560.00
Post-Installed Anchor Installation Inspector	26 hours	@	\$ 98.00 /hour	\$ 2,548.00
Anchor Bolt Load Testing	20 hours	@	\$ 98.00 /hour	\$ 1,960.00
Observation, Tag and Sample (Rebar, HSB)	40 hours	@	\$ 98.00 /hour	\$ 3,920.00
Sample Pick-up	24 hours	@	\$ 92.00 /hour	\$ 2,208.00
Vehicle and Equipment Usage	638 hours	@	\$ 10.00 /hour	\$ 6,380.00
			<b>Subtotal</b>	<b>\$ 68,600.00</b>

**Laboratory Analyses**

Proctor Density	4 tests	@	\$ 220.00 /test	\$ 880.00
Sand Equivalent	2 tests	@	\$ 125.00 /test	\$ 250.00
Concrete Compressive Strength	60 tests	@	\$ 30.00 /test	\$ 1,800.00
Shotcrete Cores Compressive Strength	16 tests	@	\$ 60.00 /test	\$ 960.00
High Strength Bolt, Nut & Washer Conformance, Per Assembly	12 tests	@	\$ 150.00 /test	\$ 1,800.00
Reinforcing Tensile or Bend, up to No. 11, A 615 & A 706	24 tests	@	\$ 60.00 /test	\$ 1,440.00
			<b>Subtotal</b>	<b>\$ 7,130.00</b>

**Project Coordination and Management**

Senior Project Engineer/Geologist/Environmental Scientist	54 hours	@	\$ 163.00 /hour	\$ 8,802.00
			<b>Subtotal</b>	<b>\$ 8,802.00</b>

**Report Preparation For The DSA-293, DSA-291**

Principal Engineer/Geologist/Environmental Scientist	6 hours	@	\$ 178.00 /hour	\$ 1,068.00
Senior Project Engineer/Geologist/Environmental Scientist	16 hours	@	\$ 163.00 /hour	\$ 2,608.00
			<b>Subtotal</b>	<b>\$ 3,676.00</b>

<b>TOTAL ESTIMATED FEE</b>				<b>\$ 88,208.00</b>
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## Schedule of Fees

### Hourly Charges for Personnel

Principal Engineer/Geologist/Environmental Scientist .....	\$ 178
Certified Industrial Hygienist .....	\$ 178
Senior Engineer/Geologist/Environmental Scientist .....	\$ 168
Senior Project Engineer/Geologist/Environmental Scientist .....	\$ 163
Certified Asbestos Consultant, Lead Inspector/Assessor, Lead Project Monitor .....	\$ 163
Project Engineer/Geologist/Environmental Scientist .....	\$ 156
Senior Staff Engineer/Geologist/Environmental Scientist .....	\$ 142
Certified Site Surveillance Technician, Lead Sampling Technician .....	\$ 142
Staff Engineer/Geologist/Environmental Scientist .....	\$ 126
GIS Analyst .....	\$ 116
Field Operations Manager .....	\$ 112
Supervisory Technician .....	\$ 98
Nondestructive Examination Technician, UT, MT, LP .....	\$ 98
ACI Concrete Technician .....	\$ 98
Concrete/Asphalt Batch Plant Inspector .....	\$ 98
Special Inspector (Concrete, Masonry, Steel, Welding, and Fireproofing) .....	\$ 98
Senior Field/Laboratory Technician .....	\$ 92
Field/Laboratory Technician .....	\$ 92
Technical Illustrator/CAD Operator .....	\$ 92
Information Specialist .....	\$ 78
Geotechnical/Environmental/Laboratory Assistant .....	\$ 76
Data Processing, Technical Editing, or Reproduction .....	\$ 68

### Other Charges

Concrete Coring Equipment (includes one technician) .....	\$ 180/hr
X-Ray Fluorescence .....	\$ 300/day
PID/FID Usage .....	\$ 140/day
Anchor load test equipment (includes technician) .....	\$ 97/hr
Hand Auger Equipment .....	\$ 65/day
Inclinometer Usage .....	\$ 40/hr
Vapor Emission Kits .....	\$ 40/kit
Level D Personal Protective Equipment (per person per day) .....	\$ 30/p/d
Rebar Locator (Pachometer) .....	\$ 30/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	\$ 170
California Bearing Ratio (CBR), D 1883	\$ 550
Chloride and Sulfate Content, CT 417 & CT 422	\$ 175
Consolidation, D 2435, CT 219	\$ 300
Consolidation, Hydro-Collapse only, D 2435	\$ 150
Consolidation – Time Rate, D 2435, CT 219	\$ 75
Direct Shear – Remolded, D 3080	\$ 350
Direct Shear – Undisturbed, D 3080	\$ 300
Durability Index, CT 229	\$ 175
Expansion Index, D 4829, IBC 18-3	\$ 190
Expansion Potential (Method A), D 4546	\$ 170
Geofabric Tensile and Elongation Test, D 4632	\$ 200
Hydraulic Conductivity, D 5084	\$ 350
Hydrometer Analysis, D 422, CT 203	\$ 220
Moisture, Ash, & Organic Matter of Peat/Organic Soils	\$ 120
Moisture Only, D 2216, CT 226	\$ 35
Moisture and Density, D 2937	\$ 45
Permeability, CH, D 2434, CT 220	\$ 300
pH and Resistivity, CT 643	\$ 175
Proctor Density D1557, D 698, CT 216, AASHTO T-180	\$ 220
Proctor Density with Rock Correction D 1557	\$ 340
R-value, D 2844, CT 301	\$ 325
Sand Equivalent, D 2419, CT 217	\$ 125
Sieve Analysis, D 422, CT 202	\$ 145
Sieve Analysis, 200 Wash, D 1140, CT 202	\$ 100
Specific Gravity, D 854	\$ 125
Thermal Resistivity (ASTM 5334, IEEE 442)	\$ 925
Triaxial Shear, C.D., D 4767, T 297	\$ 450
Triaxial Shear, C.U., w/pore pressure, D 4767, T 2297 per pt	\$ 400
Triaxial Shear, C.U., w/o pore pressure, D 4767, T 2297 per pt	\$ 250
Triaxial Shear, U.U., D 2850	\$ 180
Unconfined Compression, D 2166, T 208	\$ 130

#### MASONRY

Brick Absorption, 24-hour submersion, 5-hr boiling, 7-day, C 67	\$ 70
Brick Compression Test, C 67	\$ 55
Brick Efflorescence, C 67	\$ 55
Brick Modulus of Rupture, C 67	\$ 50
Brick Moisture as received, C 67	\$ 45
Brick Saturation Coefficient, C 67	\$ 60
Concrete Block Compression Test, 8x8x16, C 140	\$ 70
Concrete Block Conformance Package, C 90	\$ 500
Concrete Block Linear Shrinkage, C 426	\$ 200
Concrete Block Unit Weight and Absorption, C 140	\$ 70
Cores, Compression or Shear Bond, CA Code	\$ 70
Masonry Grout, 3x3x6 prism compression, C 39	\$ 45
Masonry Mortar, 2x4 cylinder compression, C 109	\$ 35
Masonry Prism, half size, compression, C 1019	\$ 120
Masonry Prism, Full size, compression, C 1019	\$ 200

#### REINFORCING AND STRUCTURAL STEEL

Chemical Analysis, A 36, A 615	\$ 135
Fireproofing Density Test, UBC 7-6	\$ 60
Hardness Test, Rockwell, A 370	\$ 70
High Strength Bolt, Nut & Washer Conformance, per assembly, A 325	\$ 150
Mechanically Spliced Reinforcing Tensile Test, ACI	\$ 175
Pre-Stress Strand (7 wire), A 416	\$ 170
Reinforcing Tensile or Bend up to No. 11, A 615 & A 706	\$ 60
Structural Steel Tensile Test: Up to 200,000 lbs. (machining extra), A 370	\$ 80
Welded Reinforcing Tensile Test: Up to No. 11 bars, ACI	\$ 65

#### CONCRETE

Compression Tests, 6x12 Cylinder, C 39	\$ 30
Concrete Mix Design Review, Job Spec	\$ 180
Concrete Mix Design, per Trial Batch, 6 cylinder, ACI	\$ 850
Concrete Cores, Compression (excludes sampling), C 42	\$ 60
Drying Shrinkage, C 157	\$ 400
Flexural Test, C 78	\$ 75
Flexural Test, C 293	\$ 75
Flexural Test, CT 523	\$ 85
Gunite/Shotcrete, Panels, 3 cut cores per panel and test, ACI	\$ 275
Jobsite Testing Laboratory	Quote
Lightweight Concrete Fill, Compression, C 495	\$ 50
Petrographic Analysis, C 856	\$ 2,000
Restrained Expansion of Shrinkage Compensation	\$ 450
Splitting Tensile Strength, C 496	\$ 100
3x6 Grout, (CLSM), C 39	\$ 45
2x2x2 Non-Shrink Grout, C 109	\$ 45

#### ASPHALT CONCRETE

Air Voids, T 269	\$ 75
Asphalt Mix Design, Caltrans (incl. Aggregate Quality)	\$ 4,500
Asphalt Mix Design Review, Job Spec	\$ 180
Dust Proportioning, CT LP-4	\$ 75
Extraction, % Asphalt, including Gradation, D 2172, CT 382	\$ 250
Extraction, % Asphalt without Gradation, D 2172, CT 382	\$ 150
Film Stripping, CT 302	\$ 120
Hveem Stability and Unit Weight D 1560, T 246, CT 366	\$ 225
Marshall Stability, Flow and Unit Weight, T 245	\$ 240
Maximum Theoretical Unit Weight, D 2041, CT 309	\$ 150
Moisture Content, CT 370	\$ 85
Moisture Susceptibility and Tensile Stress Ratio, T 238, CT 371	\$ 1,000
Slurry Wet Track Abrasion, D 3910	\$ 150
Superpave, Asphalt Mix Verification (incl. Aggregate Quality)	\$ 4,900
Superpave, Gyration Unit Wt., T 312	\$ 100
Superpave, Hamburg Wheel, 20,000 passes, T 324	\$ 1,000
Unit Weight sample or core, D 2726, CT 308	\$ 100
Voids in Mineral Aggregate, (VMA) CT LP-2	\$ 75
Voids filled with Asphalt, (VFA) CT LP-3	\$ 75
Wax Density, D 1188	\$ 100

#### AGGREGATES

Clay Lumps and Friable Particles, C 142	\$ 180
Cleaness Value, CT 227	\$ 180
Crushed Particles, CT 205	\$ 175
Durability, Coarse or Fine, CT 229	\$ 205
Fine Aggregate Angularity, ASTM C 1252, T 304, CT 234	\$ 180
Flat and Elongated Particle, D 4791	\$ 220
Lightweight Particles, C 123	\$ 180
Los Angeles Abrasion, C 131 or C 535	\$ 200
Material Finer than No. 200 Sieve by Washing, C 117	\$ 90
Organic Impurities, C 40	\$ 90
Potential Alkali Reactivity, Mortar Bar Method, Coarse, C 1260	\$ 1,250
Potential Alkali Reactivity, Mortar Bar Method, Fine, C 1260	\$ 950
Potential Reactivity of Aggregate (Chemical Method), C 289	\$ 475
Sand Equivalent, T 176, CT 217	\$ 125
Sieve Analysis, Coarse Aggregate, T 27, C 136	\$ 120
Sieve Analysis, Fine Aggregate (including wash), T 27, C 136	\$ 145
Sodium Sulfate Soundness, C 88	\$ 450
Specific Gravity and Absorption, Coarse, C 127, CT 206	\$ 115
Specific Gravity and Absorption, Fine, C 128, CT 207	\$ 175

#### ROOFING

Roofing Tile Absorption, (set of 5), C 67	\$ 250
Roofing Tile Strength Test, (set of 5), C 67	\$ 250

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.