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June 11, 2019

Patterson Joint Unified School District
c/o Mr. Wesley King
Nichols, Melburg, & Rossetto Architects + Engineers
300 Knollcrest Drive
Redding, California 96002

Proposal for Geotechnical Engineering and Geologic Hazard Report

PATTERSON HIGH SCHOOL IMPROVEMENTS

200 N. 7th Street
Patterson, California
WKA Proposal 2PR19168

As requested, Wallace-Kuhl & Associates (WKA) has prepared this proposal to prepare a combined Geotechnical Engineering and Geologic Hazards Report to support the design and construction of the proposed theater, classroom, and gymnasium buildings at the existing Patterson High School campus in Patterson, California. In preparing this proposal we reviewed a *Campus Site Plan - Layout Two* (Sheet No. SITE - 2; dated 05/10/19) prepared by Nichols, Melburg, & Rossetto Architects + Engineers.

Project Description

We understand the project will consist of the design and construction of three new slab-on-grade buildings: a single-story theater building covering about 26,000 square feet in plan area; a two-story classroom building covering about 22,000 square feet in plan area; and, a single-story gymnasium building covering about 28,500 square feet in plan area. Associated improvements will consist of asphalt concrete parking and drive areas, exterior concrete flatwork, and underground utilities.

Scope of Services

The purpose of our work will be to evaluate potential geologic hazards that may be influential to the site, investigate the site soil, geologic, seismic, and groundwater conditions in the areas of proposed construction, and to prepare a report containing our findings, conclusions and recommendations for use by the other members of the design team to prepare contract plans and specifications.

This project will be under the scrutiny of the Division of the State Architect (DSA), who will submit the geotechnical engineering report to the California Geological Survey (CGS) for review. As part of the review process, the CGS has developed minimum investigation, analysis, and reporting criteria for preparation of these reports. These criteria are presented in CGS Note 48. Among the minimum criteria presented in CGS Note 48 is a requirement that the subsurface exploration include at least one boring or exploration shaft per 5000 square feet of building footprint, with a minimum of two borings or exploration shafts for any one building.

Our intent will be to prepare a report to satisfy the requirements of CGS Note 48 with respect to a geologic hazards assessment and a geotechnical engineering evaluation of school sites.

To accomplish the purposes of our work, and to comply with the requirements of CGS Note 48, we propose to perform 12 borings and five Cone Penetration Tests (CPTs) within the proposed building footprints. The borings and CPTs will be spaced within the individual building footprints and throughout the site to meet the requirement of the CGS. The borings will extend about 15 to 20 feet below the existing ground surface and the CPTs will each extend up to 50 feet below the existing ground surface, or practical penetration refusal, whichever is less.

The subsurface exploration will be performed under permit from the Stanislaus County Environmental Health Department and backfilled with cement grout following completion of the borings. Soils generated from the investigation will be disposed of on-site in a location designated by school representatives.

Prior to performing the subsurface exploration, we will mark the exploration locations and notify the Underground Service Alert (USA) to obtain utility clearance. We also request the assistance of personnel familiar with the site to provide the locations of existing private utilities and to coordinate site access with our drilling equipment.

Undisturbed soil samples will be collected at various intervals within the borings and taken to our laboratory for further classification and selection of samples for testing. We will also collect bulk samples of the anticipated subgrade soils at the borings locations and within proposed parking and drive areas. Near-surface samples will be submitted to Sunland Analytical Lab for preliminary evaluation of the corrosion potential of the soils.

Upon completion of our field investigation, laboratory testing and engineering and geologic analyses, we would prepare a combined Geotechnical Engineering and Geologic Hazards (GER-GHZ) report containing:

1. Site vicinity map;
2. Test boring location plan;
3. Logs of test borings;
4. Geologic Cross Section
5. Laboratory test results;



6. Findings regarding site conditions, including;
 - a. Site description
 - b. Site soil and geology
 - c. Groundwater
 - d. Faults and seismicity
 - e. Historic seismicity
 - f. Coseismic ground deformation
7. Conclusions regarding:
 - a. Geologic hazards (e.g., liquefaction, seismic-induced settlement, landslides, naturally-occurring asbestos, flood hazards, dam inundation, etc.) influencing the site
 - b. 2016 California Building Code (CBC) seismic design parameters
 - c. Bearing capacity
 - d. Expansive soil conditions
 - e. Pavement subgrade quality
 - f. Preliminary soil corrosivity potential
 - g. Effect of groundwater on development
 - h. Effect of previous improvements on the planned development
 - i. Excavation conditions
 - j. Soil suitability for use in fill construction
8. Recommendations regarding:
 - a. Site clearing
 - b. Site preparation and fill placement
 - c. Utility trench backfill
 - d. Building foundation design
 - e. Pavement design for varying traffic conditions
 - f. Interior and exterior concrete slab support
 - g. Site drainage
 - h. Trench backfill

The preceding scope of work will be performed under the direct supervision of a Certified Engineering Geologist and Registered Geotechnical Engineer as required by CCR Title 24 and CGS Note 48.

Our scope of work does not include any environmental assessment, review of project plans and specifications, nor the costs associated with testing and observation services required during construction. We would be pleased to provide these services at a later date, if requested.

Schedule

We anticipate the field exploration can begin within about two weeks after receiving written authorization to proceed (drill permits from Stanislaus County require about one week to obtain) provided we are given access to the site. The field exploration should take about two to three days to complete and the drilling and CPT operations may not be performed concurrently.



Laboratory testing will require about two weeks to complete and the final report can be completed within about two to three weeks following completion of the laboratory testing.

However, preliminary information can be transmitted to the project team within several days after completion of the field exploration, if required.

We assume the work can be completed Monday through Friday during normal working hours (7 AM to 7 PM). Additional fees will be required for work performed on weekends or at night.

Fee Estimate

Our total estimated fee for the scope of services noted above is \$29,900 assuming the site is accessible with truck mounted drilling and CPT equipment. Additional fees will be required if specialty track-mounted drilled rigs and/or CPT equipment is required. Note that our fee includes approximately \$3000 to prepare and obtain Stanislaus County permits required to complete the proposed scope of work.

We would not exceed the fee estimate unless the field exploration uncovers conditions requiring additional study or if our work scope is changed (e.g., revisions to the site plan such as building locations, number of buildings, square footage of building footprint, etc.), and only after written approval.

Agreement

If this proposal is acceptable, please indicate so by signing one copy of the attached agreement and returning it along with one copy of this letter as our written authorization to proceed.

We appreciate the opportunity to submit this proposal and look forward to the possibility of providing you with our services. If you have any questions concerning this proposal or work scope, please contact our office.

Wallace - Kuhl & Associates



Matthew S. Moyneur
Senior Engineer
GE No. 2920, Expires 6/30/20

Attachments: Geotechnical Services Agreement
Schedule of Fees 2019P





GEOTECHNICAL SERVICES AGREEMENT

PATTERSON HIGH SCHOOL IMPROVEMENTS
Patterson, California

PATTERSON JOINT UNIFIED SCHOOL DISTRICT ("CLIENT") and River City Geoprosessionals, Inc., dba WALLACE • KUHL & ASSOCIATES ("WKA") agree:

1. **PROFESSIONAL SERVICES.** WKA will perform professional services and will receive compensation pursuant to the terms and conditions of the attached proposal letter dated June 11, 2019, which is incorporated herein by reference. In performing professional service, WKA shall use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of the geotechnical engineering profession practicing under similar conditions at the same time and in the same or similar locality. CLIENT understands and acknowledges the inherent risks connected with construction and agrees that no warranty, either expressed or implied, is included in this Agreement or in any drawing, specification, report or opinion produced pursuant to this Agreement.

CLIENT recognizes that subsurface conditions beneath the project site may vary from those encountered in borings, surveys or explorations and that information and recommendations developed by WKA are based solely on the information available to it. Any exploration, testing surveys and analysis associated with the work will be performed by WKA solely to fulfill the purpose of this Agreement and WKA is not responsible for interpretation by others of the information developed.

2. **DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS.** WKA is undertaking this study with the belief there are no hazardous materials on the site. Hazardous materials may exist at a site where there is not reason to believe they could or should be present. WKA and CLIENT agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. WKA and CLIENT also agree that the discovery of unanticipated hazardous materials may make it necessary for WKA to take immediate measures to protect health and safety, and CLIENT agrees to compensate WKA for any such extra work. CLIENT also recognizes there is a risk that sampling through an unknown contaminated zone may result in spread of contamination to an aquifer, underground stream, or other hydrous body not previously contaminated with resultant spreading of hazardous materials off-site. CLIENT recognizes nothing can be done to prevent such an occurrence because such sampling is a necessary aspect of the work that WKA will perform for CLIENT's benefit. CLIENT waives any claim against WKA and agrees to defend, indemnify and save WKA harmless from any claim or liability for injury or loss of any type arising from WKA's discovery of unanticipated hazardous materials on a site, or from the spread of such contamination to an aquifer, underground stream, or other hydrous body not previously contaminated due to WKA's performance under this Agreement.

3. **SAMPLES.** WKA will destroy all samples upon completion of testing unless directed by CLIENT in writing to retain them. Upon written notice, WKA will deliver samples to CLIENT, charges collect, or will arrange for storage of samples at an agreed location for an agreed charge.

4. **PAYMENT.** WKA will submit invoices for services rendered on a periodic basis; provided, however, said invoices shall not be submitted more frequently than once every 30 days. Invoices shall be due upon receipt, but shall not be considered delinquent if paid on or before the expiration of 30 days from date of mailing. If payment is not so made, a late payment charge shall be due on the invoice amount at the rate of one and one-half percent (1½%) per month on the unpaid balance from the date of the invoice until paid. In the event of delinquency, CLIENT shall pay the actual cost of collection including, without limitation, reasonable attorneys' fees.

5. **RIGHT-OF-ENTRY.** Unless otherwise agreed, CLIENT will furnish right-of-entry for WKA to make borings, surveys and/or explorations. WKA will take reasonable precautions to reduce damage to property. However, it is understood by CLIENT that in the normal course of work, some damage may occur. CLIENT recognizes that it is his responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials or damage to property incurred in the normal course of work.

6. **UTILITIES.** WKA will request responsible utility owners to locate off-site lines. CLIENT agrees to be solely responsible for designating the locations of all utility lines and subterranean structures within the property lines of the project. WKA will not be liable for damage to subterranean structures (pipes, tanks, conduits, wires, etc.) that are not correctly located on or off the site.

7. **JOB SITE.** CLIENT agrees that the construction contractor will be required by CLIENT to assume sole and complete responsibility for job site conditions during construction of the project, including safety of persons and property. CLIENT further agrees to indemnify and hold WKA harmless from any and all liability in connection with the performance of work during construction of this project, excepting liability arising directly from the negligence of WKA.

8. **REPORTS.** Reports, plans and other work prepared by WKA remain the property of WKA. CLIENT agrees that all reports and other work furnished to the CLIENT and his agents not paid for will be returned upon demand, and will not be used for licensing, permits, design and/or construction.

9. **LIABILITY.** WKA carries workers' compensation insurance and public liability insurance for bodily injury and property damage that may be suffered by third parties and members of the public who are not covered by the limitation of liability set forth below in Paragraph 10. Certificates of coverage will be furnished to CLIENT upon written request. WKA assumes the risk of damage caused by its personnel to its supplies and equipment. In the event CLIENT desires greater insurance coverage and directs WKA to take out additional insurance, WKA shall procure and maintain additional insurance, if procurable, at CLIENT's expense; provided, however, WKA shall not be responsible for property damage and bodily injury resulting from any cause, including fire and explosion, beyond the amount and coverage of WKA's insurance.

10. **LIMITATION OF LIABILITY.** WKA's liability for damages due to alleged negligent professional acts, errors and omissions will be limited to a sum not to exceed \$50,000 or WKA's total fee, whichever is greater. Notwithstanding any other provision herein to the contrary, WKA shall not be responsible or held liable for any special, indirect or consequential damages resulting in any way from WKA's performance under this Agreement.

11. **GOVERNING LAW; DISPUTES.** This Agreement shall be governed by the laws of the State of California. Should either party hereto bring suit in court to enforce any term of the Agreement, it is agreed that the each party shall bear the cost of their own legal expenses.

PATTERSON JOINT UNIFIED SCHOOL DISTRICT

WALLACE • KUHL & ASSOCIATES

Signature

Signature

Name printed or typed

Title

Matthew S. Moyneur / Senior Engineer / GE No. 2920
Name/Title

Date

Date

Company Address

PROFESSIONAL SERVICES

PROFESSIONAL SERVICES

Principal Engineer / Geologist	\$180.00	per hour
Senior Engineer / Geologist	\$180.00	per hour
Senior Environmental Scientist	\$180.00	per hour
Project Engineer / Geologist	\$150.00	per hour
Project Environmental Scientist	\$150.00	per hour
Senior Staff Engineer / Geologist	\$140.00	per hour
Senior Staff Environmental Scientist	\$140.00	per hour
Staff Engineer / Geologist	\$135.00	per hour
Staff Environmental Scientist	\$135.00	per hour
Senior Environmental Technician	\$110.00	per hour
Senior / Supervising Technician	\$110.00	per hour
Draftsperson / GIS Technician	\$105.00	per hour
Administrative Assistant	\$80.00	per hour

FIELD INVESTIGATION TESTING

Seismic Refraction Survey	\$180.00	per hour
Thermal Resistivity Testing	\$180.00	per hour
Electrical Resistivity Survey	\$180.00	per hour
Hand Augering/Sampling - Engineer	\$165.00	per hour
Photoionization Detector	\$180.00	per hour
Rebar Location / GPR	\$300.00	per hour

LITIGATION

Data Review/Consultation	\$260.00	per hour
Depositions/Expert Witness Testimony	\$375.00	per hour

EXPENSES

Vehicle Charges (<i>Subject to periodic adjustment due to fuel cost</i>)	\$0.75	per mile
Subsistence	\$70.00	per day
Lodging	Cost	
Services by Associate Firms and other outside services	Cost	plus 20%
Equipment rental, freight, special materials	Cost	plus 20%
Extra Report Copies		
Black and white versions	\$25.00	each
Color photography versions	\$35.00	each

PREMIUM CHARGES

Overtime and Saturdays	hourly rate plus	40	percent
Sunday and Holidays, and over 8 hrs on Saturday	hourly rate plus	75	percent

SHIFT DIFFERENTIAL

A 25 percent shift differential surcharge will be added to the hourly rate of personnel involved in scheduled testing work between the hours of 6 P.M. and 5 A.M., as well as a four hour minimum.



FIELD SERVICES

CONCRETE & REINFORCING STEEL

Ball Penetration (Kelly Ball)	\$135.00 /hr.
Batch Plant Inspection	\$105.00 /hr.
CaCl Moisture Emission Test Kit	\$35.00 /kit
CaCl Moisture Emission Testing	\$100.00 /hr.
CLSM/CDF/Slurry Testing	\$100.00 /hr.
Concrete Mix Design Review	\$180.00 /hr.
Concrete Placement Obs/Cast Cylinder	\$105.00 /hr.
Concrete Rebound Number Testing	\$135.00 /hr.
Concrete Trial Batch	\$105.00 /hr.
Floor Flatness Testing	\$135.00 /hr.
High Strength Grout Sampling / Testing	\$105.00 /hr.
Rebar / Post Tension Special Inspection	\$110.00 /hr.
Rebar Location / GPR	\$300.00 /hr.
Rebar Location / Pachometer	\$135.00 /hr.
Rebar Placement Inspection	\$110.00 /hr.
Reinforcing Steel Sampling/Tagging	\$105.00 /hr.
Relative Humidity Testing	\$135.00 /hr.
Shotcrete Special Inspection	\$105.00 /hr.
Transport Cylinders / Samples to Lab	\$105.00 /hr.

CORING

Coring (Technician + equipment)	\$135.00 /hr.
Coring (Technician assistant)	\$105.00 /hr.

POST-INSTALLED ANCHORS

Concrete Anchor Installation Inspection	\$105.00 /hr.
Concrete Anchor Proof Load Testing	\$135.00 /hr.
Concrete Anchor Torque Testing	\$110.00 /hr.
Suspended Ceiling Inspection / Testing	\$135.00 /hr.

STRUCTURAL STEEL

Fireproofing Special Inspection / Testing	\$105.00 /hr.
High Strength Bolt Special Inspection	\$110.00 /hr.
Non-Destructive Testing - UT/MT/PT	\$120.00 /hr.
Tower Certified Special Inspector	\$135.00 /hr.
Welding Special Inspection - Field	\$110.00 /hr.
Welding Special Inspection - Shop	\$110.00 /hr.

MASONRY

In-Place Masonry Flatjack Testing	\$160.00 /hr.
In-Place Masonry Shear Testing	\$135.00 /hr.
Masonry Materials Sampling / Testing	\$105.00 /hr.
Masonry Special Inspection	\$105.00 /hr.
Masonry Special Inspection DSA Cert.	\$115.00 /hr.

SOILS & ASPHALT CONCRETE

Asphalt Concrete Inspection / Testing	\$110.00 /hr.
Asphalt Concrete Materials Sampling	\$110.00 /hr.
Building Pad Special Inspection / Testing	\$110.00 /hr.
Deep Foundation Inspection	\$110.00 /hr.
Flatwork AB Inspection / Testing	\$110.00 /hr.
Flatwork Subgrade Inspection / Testing	\$110.00 /hr.
Grading Inspection / Testing	\$110.00 /hr.
Hand Augering and Sampling	\$140.00 /hr.
Pavement AB Inspection / Testing	\$110.00 /hr.
Pavement Subgrade Inspection / Testing	\$110.00 /hr.
Proof Rolling Observation	\$110.00 /hr.
Shallow Foundation Inspection	\$110.00 /hr.
Slab Subgrade Soil Moisture Tests	\$110.00 /hr.
Soil / Aggregate Sampling	\$110.00 /hr.
Soil Treatment Testing / Observation	\$110.00 /hr.
Structure Backfill Inspection / Testing	\$110.00 /hr.
Subgrade Stabilization Observation	\$110.00 /hr.
Utility Trench Backfill Testing	\$110.00 /hr.
WKA Drill Rig (including operator)	\$295.00 /hr.
WKA Drill Rig (helper)	\$110.00 /hr.

SPECIALIZED SERVICES

Coefficient of Friction Testing	\$140.00 /hr.
Crack Monitoring	**
Epoxy / FRP Installation Inspection	\$105.00 /hr.
Existing Building Evaluation / Demo	\$105.00 /hr.
Existing Building Evaluation / Document	\$105.00 /hr.
Existing Building Evaluation / Repair	\$105.00 /hr.
Field Investigate Support	\$105.00 /hr.
Firestopping Inspection	\$120.00 /hr.
GFRC Inspection / Testing	\$105.00 /hr.
Glulam / Truss Fabrication Inspection	\$105.00 /hr.
Glulam / Truss Inspection Travel	\$80.00 /hr.
Meggar Ground Testing	\$135.00 /hr.
Prestress Framing Installation	\$105.00 /hr.
Proto Wall Inspection / Testing	\$105.00 /hr.
Roofing Inspection	\$105.00 /hr.
Shear Nailing Inspection	\$105.00 /hr.
Soil Elect. Resistivity Testing - Technician	\$140.00 /hr.
Thickness Testing - Coating / Steel	\$135.00 /hr.
Timber Framing / Hardware Inspection	\$105.00 /hr.
Timber-in-Structure Inspection	\$125.00 /hr.
Vapor Barrier Inspection	\$105.00 /hr.
Vibration Monitoring	**

GENERAL

Inspection / Testing Cancelled	*
Reinspection / Retesting	*
Stand-by Time	*

* Based on hourly rate of Inspection or Testing schedule

** Based on Staff Classification

MINIMUM CHARGES

A two hour minimum charge will apply to field technician services with the following exceptions:

- Single trip pickup and delivery services, where a one hour minimum will apply.
- Saturday, Sunday and holidays, where a four hour minimum charge will apply.



LABORATORY SERVICES

SOIL

Atterberg Limits (LL/PI)	ASTM D4318	\$155.00	each
CLSM/CDF/Soil Cement Compression Test	ASTM D4832	\$55.00	each
Compaction Characteristics	ASTM D698	\$250.00	each
Compaction Characteristics	ASTM D1557	\$250.00	each
Compaction Characteristics	CTM 216	\$250.00	each
Consolidation (8 loads + 1 rebound)	ASTM D2435	\$460.00	each
Consolidation (additional loads)	ASTM D2435	\$55.00	each
Expansion Index	ASTM D4829	\$185.00	each
Hydraulic Conductivity, Flexible Wall Permeability	ASTM D5084	\$405.00	each
Lime-Treated Unconfined Compression	CTM 373	\$790.00	each
Moisture Content	ASTM D2216	\$25.00	each
Organic Content	ASTM D2974	\$95.00	each
Resistance "R" Value - Laboratory Lime-Treated	ASTM D2844, CTM 301	\$305.00	each
Resistance "R" Value - Untreated	ASTM D2844, CTM 301	\$255.00	each
Sieve Analysis - Passing No. 200 only	ASTM D1140	\$95.00	each
Sieve Analysis - Sieve & Hydrometer	ASTM D7928	\$165.00	each
Sieve Analysis - Sieve only (Coarse or Fine)	ASTM D6913	\$105.00	each
Specific Gravity of Soils	ASTM D854	\$130.00	each
Thermal Resistivity	ASTM D5334	\$55.00	each
Triaxial Compression Test, 1 point - Remolded	ASTM D4767	\$330.00	each
Triaxial Compression Test, 1 point - Undisturbed	ASTM D4767	\$255.00	each
Triaxial Compression Test, 3 Pt. Staged - Remolded	ASTM D4767	\$385.00	each
Triaxial Compression Test, 3 Pt. Staged - Undisturbed	ASTM D4767	\$300.00	each
Unconfined Compression Test	ASTM D2166	\$105.00	each
Unit Weight/Moisture Content - Tube Sample	ASTM D2937/D2216	\$35.00	each

AGGREGATE

Aggregate Unit Weight	ASTM C29	\$55.00	each
Clay Lumps and Friable Particles	ASTM C142	\$160.00	per size
Cleanness Value	CTM 227	\$165.00	each
Durability Index (Coarse or Fine)	CTM 229	\$160.00	each
Flat and Elongated Particles in Coarse Aggregate	ASTM D4791	\$120.00	per size
Fractured/Crushed Particles	ASTM D5821, CTM 205	\$120.00	per size
Organic Impurities in Fine Aggregates	ASTM C40	\$60.00	each
Resistance "R" Value - Aggregate	CTM 301	\$295.00	each
Sand Equivalent, 1 point	CTM 217	\$90.00	each
Sand Equivalent, 3 points	CTM 217	\$130.00	each
Sieve Analysis - Coarse or Fine	ASTM C136, CTM 202	\$110.00	each
Sieve Analysis - Passing No. 200 only	ASTM C117	\$95.00	each
Sodium Sulfate Soundness	ASTM C88, CTM 214	\$150.00	per size
Specific Gravity and Absorption (Coarse or Fine)	ASTM C127, C128	\$125.00	each

ASPHALT CONCRETE

Asphalt Content (Ignition Oven)	ASTM D6307, CTM 382	\$250.00	each
Hveem Compacted Unit Weight, 1 point	ASTM D1560/D2726		
	CTM 304/308	\$100.00	each
Laboratory Test Maximum Density (LTMD), 5 points	CTM 375	\$355.00	each
Marshall Compacted Unit Weight, 1 point	ASTM D6926/D2726	\$95.00	each
Sieve Analysis of AC Aggregate (Coarse and Fine)	ASTM D5444, CTM 202	\$170.00	each
Stabilometer Value, 1 point	CTM 366	\$130.00	each
Theoretical Maximum Density	ASTM D2041, CTM 309	\$155.00	each
Thickness of AC Cores	ASTM D3549	\$15.00	each
Unit Weight of AC Cores	ASTM D2726, D1188, CTM 308	\$55.00	each



LABORATORY SERVICES

CONCRETE

Compression Test, Concrete Cylinder	ASTM C39	\$25.00	each
Compression Test, Concrete Cylinder - Hold	ASTM C39	\$25.00	each
Compression Test, Concrete Core	ASTM C42, C39	\$80.00	each
Compression Test, Shotcrete Core	ASTM C42, C39	\$100.00	each
Compression Test, High Strength Grout	ASTM C1107/C109	\$40.00	each
Concrete Cylinder Mold		\$6.00	each
Density / Unit Weight of Concrete	ASTM C567, C642	\$90.00	each
Flexural Strength Test, Concrete Beam	ASTM C78	\$105.00	each
Laboratory Drying Shrinkage Test, per beam	ASTM C157	\$185.00	each
Splitting Tensile Test, Concrete Cylinder	ASTM C496	\$80.00	each

MASONRY

Brick			
Compression Test	ASTM C67	\$65.00	each
Modulus of Rupture	ASTM C67	\$75.00	each
Absorption	ASTM C67	\$90.00	each
Concrete Masonry Unit			
Compression Test	ASTM C140	\$75.00	each
Absorption & Moisture Content	ASTM C140	\$75.00	each
Linear Drying Shrinkage	ASTM C426	\$210.00	each
Compression Test, Composite Masonry Prism	ASTM C1314	\$120.00	each
Compression Test, Masonry Grout	ASTM C1019	\$40.00	each
Compression Test, Mortar	ASTM C780	\$35.00	each
Core Shear Test	CBC Section 2105A	\$85.00	each
Masonry Core Compression Test	CBC Section 2105A	\$75.00	each

STEEL

Anchor Bolt Tensile Test	ASTM F606	\$100.00	each
Fireproofing Density Test	ASTM E605	\$70.00	each
High Strength Bolt Assembly Laboratory Testing			
Bolt - Wedge Tension Test	ASTM F606	\$75.00	each
Bolt - Proof Load Test	ASTM F606	\$75.00	each
Bolt - Hardness Test	ASTM E18	\$35.00	each
Nut - Proof Load Test	ASTM F606	\$75.00	each
Nut - Hardness Test	ASTM E18	\$35.00	each
Washer - Hardness Test	ASTM E18	\$35.00	each
Prestressing Steel Strand Tensile Test	ASTM A416/A1061	\$130.00	each
Reinforcing Steel (Rebar) Tensile Test			
Up to No. 7	ASTM A615, A706/A370	\$80.00	each
From No. 8 through No. 14	ASTM A615, A706/A370	\$110.00	each
Reinforcing Steel (Rebar) Bend Test	ASTM A615, A706/A370	\$40.00	each
Structural Steel Tensile Test			
Up to 3/4"	ASTM A370	\$90.00	each
Sizes Larger Than 3/4"	ASTM A370	\$115.00	each
Machining of Test Specimens		cost plus %20	
Structural Steel Hardness Test	ASTM E18	\$80.00	each
Torque Wrench Calibration (minimum of 4 wrenches)		\$80.00	each
Weld Assembly, Guided Bend/Macroetch/T-Bend Test	AWS D1.1, ASTM E190	\$80.00	per test
Welder Qualification Test Inspection		\$90.00	per hour
Welder Qualification Test Record		\$100.00	each

TESTING SERVICES

Laboratory Technician		\$90.00	per hour
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