

December 11, 2020

Mr. John Lial  
Director of Operations, Maintenance and Transportation  
Escalon Unified School District  
300 Knollcrest Drive  
Redding, California 96002

*Geotechnical Engineering and Geologic Hazards Services – Proposal*  
**COLLEGEVILLE ELEMENTARY SCHOOL MULTIPURPOSE BUILDING**  
6701 Jack Tone Road  
Stockton, California  
WKA Proposal No. 2PR20286

As requested, we are pleased to submit this proposal to provide geotechnical engineering and geologic hazards services for the proposed multipurpose building on the Collegeville Elementary School campus in Stockton, California. To assist with the preparation of this proposal, we have reviewed a site plan prepared by Rainforth Grau Architects dated 11/12/20.

#### Proposed Improvements

We understand the project will consist of a new multipurpose building and associated improvements, including a new parking lot. We understand the multipurpose building will cover about 12,800 square feet in plan area. Associated development will consist of underground utilities, asphalt concrete and concrete pavements, and sidewalks.

#### Purpose and Proposed Scope of Services

The purposes of our study would be to evaluate potential geologic hazards that may be influential to the site; explore the site, soil, geologic, seismic, and groundwater conditions in the areas of proposed construction; and, to prepare a report for each project containing our geotechnical 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) and the geotechnical and geologic hazards report prepared for the project will be submitted to the California Geological Survey (CGS) for review. As part of the review process, 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. Therefore, our intent will be to prepare a report to satisfy the requirements of CGS Note 48 with respect to a geologic hazard assessment and a geotechnical engineering evaluation of school sites.

To accomplish our study, our scope of services would include the drilling and sampling of four borings across the site (two borings within the proposed building footprint and two borings within the proposed parking area). The borings, in addition to the Cone Penetration Tests (CPTs) noted below, will be spaced to provide adequate coverage to satisfy CGS Note 48. The borings would be advanced to depths ranging from about 10 to 20 feet below existing grades or to practical drilling refusal, whichever is encountered first by using a standard truck-mounted drill rig equipped with solid flight, helical augers or hollow-stem augers.

Soil samples would be taken to our laboratory for further classification and selection of testing. Selected soil samples would be tested for, but not limited to, in-situ dry density, natural moisture content, gradations, expansion potential, unconfined compressive strength, plasticity index, and Resistance-value.

In addition to the borings, a CPT would be advanced at the site. The CPT would be advanced to 50 feet below existing grades (or practical refusal) for the purposes of evaluating liquefaction potential and developing the necessary geologic cross-section for the project.

The CPT and borings would be backfilled with a slurry of neat-cement in accordance with the requirements of San Joaquin County Environmental Health Department.

Prior to performing the subsurface explorations, we would mark the exploration locations and notify the Underground Service Alert (USA) to obtain utility clearance. Although USA will alert public utility agencies, we would also coordinate with personnel familiar with the site to review our proposed exploration locations for conflicts with possible underground utilities that currently exist. We would take precautions not to disturb underground utilities that are clearly marked in the field or brought to our attention; however, we cannot be responsible for damage to unmarked underground utilities or those that are not known to us.

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 the site containing:



1. Vicinity map;
2. Site plan that shows the boring and CPT locations;
3. Logs of borings and CPT;
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. Co-seismic 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. 2019 California Building Code (CBC) seismic design parameters
  - c. Bearing capacity
  - d. Expansive soil conditions
  - e. Preliminary soil corrosivity potential based on previous testing
  - f. Effect of groundwater on development
  - g. Effect of previous improvements on the planned development
  - h. Excavation conditions
  - i. Soil suitability for use in fill construction
8. Recommendations regarding:
  - a. Site clearing and demolition
  - b. Site preparation and fill placement
  - c. Utility trench backfill
  - d. Building foundation design
  - e. Interior and exterior concrete slab support
  - f. Below-grade wall design
  - g. Perimeter wall design
  - h. Site drainage
  - i. Pavement design alternatives for varying traffic conditions.

The preceding scope of services 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.



### Fee Estimate

We anticipate that the scope of work described above can be completed for a total estimated fee of **\$18,900**.

We would not exceed the fee estimate unless the field explorations uncover conditions requiring additional studies, site access issues arise which delays the field crew, or if our work scope is changed (e.g. revisions to the current site plan such as building locations, number and size of buildings, etc.), and only after receiving authorization from your office for additional work. Final billing will be in accordance with the attached standard schedule of fees for the actual work accomplished.

Please note these fees do not include costs associated with environmental testing and evaluation, nor testing and observation services required during construction.

### Schedule

We anticipate that project planning and scheduling can begin within one to two days of receiving written authorization to proceed. The boring permit application would be submitted to the San Joaquin County Environmental Health Department which may take up to 10 business days for approval. The geotechnical field explorations would be scheduled within one week of receiving the approved permit, depending on drill rig availability and site accessibility.

Based on current availability, we anticipate the drilling and CPT work will be performed within about two weeks of receiving the permit. The field explorations should take one to two days to complete and the drilling and CPT work may not be done concurrently. Laboratory testing would require about two week to complete; at which time we can provide verbal recommendations to the other design consultants. The final report can be completed within about two additional weeks following completion of the laboratory testing.

### Project Assumptions

Our services are based on the following assumptions. In the event that any ultimate facts or events differ from such assumptions, our services, schedule, and compensation may need to be adjusted, if necessary.

- Your office will provide site access for the field explorations, if necessary.
- Costs for private utility locators are not included within our scope of services.



- The site is accessible to a standard truck-mounted drilling and CPT rigs and associated support vehicles.
- The field explorations can be performed during normal business hours, excluding weekends and holidays.
- We anticipate that soil cuttings from the borings will not be contaminated and excess soil can be spread out on site. Costs to drum, characterize and dispose of drilling waste are not included within our scope of services.
- This project is subject to current prevailing wage laws; therefore, we have included these costs in our estimate.

Department of Industrial Relations (DIR) Number

We understand that the project will be subject to current prevailing wage laws. We request that your firm provide the project number issued by the Department of Industrial Relations in the space provided below:

DIR No. \_\_\_\_\_


This DIR number will allow us to properly submit certified payroll documentation as required by the State. If the DIR number is not available, please notify us.

Authorization

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. This proposal is valid for 60 days from the date shown on this proposal.

We appreciate the opportunity to submit this proposal and look forward to the possibility of providing you with our services. If you have questions regarding this proposal or scope of services, please do not hesitate to contact me at (916) 372-1434.

Wallace-Kuhl & Associates

  
Matthew S. Moyneur  
Senior Engineer  
GE No. 2920, Exp. 6/30/22

Attachment: Geotechnical Services Agreement  
Schedule of Fees 2021P



ESCALON 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 December 11, 2020, 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.

**ESCALON UNIFIED SCHOOL DISTRICT**\_\_\_\_\_  
Signature\_\_\_\_\_  
Name printed or typed\_\_\_\_\_  
Title\_\_\_\_\_  
Date\_\_\_\_\_  
Company Address**WALLACE • KUHL & ASSOCIATES**\_\_\_\_\_  
Signature\_\_\_\_\_  
Matthew S. Moyneur / Senior Engineer / GE No. 2920  
Name/Title\_\_\_\_\_  
Date

**PROFESSIONAL SERVICES****SCHEDULE OF FEES 2021P**

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**PROFESSIONAL SERVICES**

Principal Engineer / Geologist	\$200.00	per hour
Senior Engineer / Geologist	\$195.00	per hour
Senior Environmental Scientist	\$195.00	per hour
Project Engineer / Geologist	\$160.00	per hour
Project Environmental Scientist	\$160.00	per hour
Senior Staff Engineer / Geologist	\$150.00	per hour
Senior Staff Environmental Scientist	\$150.00	per hour
Staff Engineer / Geologist	\$145.00	per hour
Staff Environmental Scientist	\$145.00	per hour
Senior Environmental Technician	\$120.00	per hour
Senior / Supervising Technician	\$120.00	per hour
Draftsperson / GIS Technician	\$115.00	per hour
Administrative Assistant	\$90.00	per hour

**FIELD INVESTIGATION TESTING**

Seismic Refraction Survey	\$195.00	per hour
Thermal Resistivity Testing	\$195.00	per hour
Electrical Resistivity Survey	\$195.00	per hour
Hand Augering/Sampling - Engineer	\$175.00	per hour
Photoionization Detector	\$195.00	per hour
Rebar Location / GPR	\$320.00	per hour

**LITIGATION**

Data Review/Consultation	\$280.00	per hour
Depositions/Expert Witness Testimony	\$400.00	per hour

**EXPENSES**

Vehicle Charges ( <i>Subject to periodic adjustment due to fuel cost</i> )	\$0.75	per mile
Subsistence	\$75.00	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)	\$145.00 /hr.
Batch Plant Inspection	\$115.00 /hr.
CaCl Moisture Emission Test Kit	\$35.00 /kit
CaCl Moisture Emission Testing	\$110.00 /hr.
CLSM/CDF/Slurry Testing	\$110.00 /hr.
Concrete Mix Design Review	\$195.00 /hr.
Concrete Placement Obs/Cast Cylinder	\$115.00 /hr.
Concrete Rebound Number Testing	\$145.00 /hr.
Concrete Trial Batch	\$115.00 /hr.
Floor Flatness Testing	\$145.00 /hr.
High Strength Grout Sampling / Testing	\$115.00 /hr.
Rebar / Post Tension Special Inspection	\$120.00 /hr.
Rebar Location / GPR	\$320.00 /hr.
Rebar Location / Pachometer	\$145.00 /hr.
Rebar Placement Inspection	\$120.00 /hr.
Reinforcing Steel Sampling/Tagging	\$115.00 /hr.
Relative Humidity Testing	\$145.00 /hr.
Shotcrete Special Inspection	\$115.00 /hr.
Transport Cylinders / Samples to Lab	\$115.00 /hr.

**CORING**

Coring (Technician + equipment)	\$145.00 /hr.
Coring (Technician assistant)	\$115.00 /hr.

**POST-INSTALLED ANCHORS**

Concrete Anchor Installation Inspection	\$115.00 /hr.
Concrete Anchor Proof Load Testing	\$145.00 /hr.
Concrete Anchor Torque Testing	\$120.00 /hr.
Suspended Ceiling Inspection / Testing	\$145.00 /hr.

**STRUCTURAL STEEL**

Fireproofing Special Inspection / Testing	\$115.00 /hr.
High Strength Bolt Skidmore Testing	\$145.00 /hr.
High Strength Bolt Special Inspection	\$120.00 /hr.
Material Identification	\$120.00 /hr.
Non-Destructive Testing - UT/MT/PT	\$145.00 /hr.
Tower Certified Special Inspector	\$145.00 /hr.
Welding Special Inspection - Field	\$120.00 /hr.
Welding Special Inspection - Shop	\$120.00 /hr.

**MASONRY**

In-Place Masonry Flatjack Testing	\$175.00 /hr.
In-Place Masonry Shear Testing	\$145.00 /hr.
Masonry Materials Sampling / Testing	\$115.00 /hr.
Masonry Special Inspection	\$115.00 /hr.
Masonry Special Inspection DSA Cert.	\$125.00 /hr.

**SOILS & ASPHALT CONCRETE**

Asphalt Concrete Inspection / Testing	\$120.00 /hr.
Asphalt Concrete Materials Sampling	\$120.00 /hr.
Building Pad Special Inspection / Testing	\$120.00 /hr.
Deep Foundation Inspection	\$120.00 /hr.
Flatwork AB Inspection / Testing	\$120.00 /hr.
Flatwork Subgrade Inspection / Testing	\$120.00 /hr.
Grading Inspection / Testing	\$120.00 /hr.
Hand Augering and Sampling	\$120.00 /hr.
Pavement AB Inspection / Testing	\$120.00 /hr.
Pavement Subgrade Inspection / Testing	\$120.00 /hr.
Proof Rolling Observation	\$120.00 /hr.
Shallow Foundation Inspection	\$120.00 /hr.
Slab Subgrade Soil Moisture Tests	\$120.00 /hr.
Soil / Aggregate Sampling	\$120.00 /hr.
Soil Treatment Testing / Observation	\$120.00 /hr.
Structure Backfill Inspection / Testing	\$120.00 /hr.
Subgrade Stabilization Observation	\$120.00 /hr.
Utility Trench Backfill Testing	\$120.00 /hr.
WKA Drill Rig (including operator)	\$240.00 /hr.
WKA Drill Rig (helper)	\$120.00 /hr.

**SPECIALIZED SERVICES**

Coefficient of Friction Testing	\$150.00 /hr.
Crack Monitoring	**
Epoxy / FRP Installation Inspection	\$115.00 /hr.
Existing Building Evaluation / Demo	\$115.00 /hr.
Existing Building Evaluation / Document	\$115.00 /hr.
Existing Building Evaluation / Repair	\$115.00 /hr.
Field Investigate Support	\$115.00 /hr.
Firestopping Inspection	\$130.00 /hr.
GFRC Inspection / Testing	\$115.00 /hr.
Glulam / Truss Fabrication Inspection	\$125.00 /hr.
Glulam / Truss Inspection Travel	\$90.00 /hr.
Meggar Ground Testing	\$145.00 /hr.
Prestress Framing Installation	\$115.00 /hr.
Proto Wall Inspection / Testing	\$115.00 /hr.
Roofing Inspection	\$115.00 /hr.
Shear Nailing Inspection	\$115.00 /hr.
Soil Elect. Resistivity Testing - Technician	\$150.00 /hr.
Thickness Testing - Coating / Steel	\$145.00 /hr.
Timber Framing / Hardware Inspection	\$115.00 /hr.
Timber-in-Structure Inspection	\$145.00 /hr.
Vapor Barrier Inspection	\$115.00 /hr.
Vibration Monitoring	**

**GENERAL**

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

\* Based on hourly rate of Inspection or Testing scheduled

\*\* 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) - Wet Method	ASTM D4318	\$165.00	each
CLSM/CDF/Soil Cement Compression Test	ASTM D4832	\$60.00	each
Compaction Characteristics	ASTM D698	\$270.00	each
Compaction Characteristics	ASTM D1557	\$270.00	each
Compaction Characteristics	CTM 216	\$270.00	each
Consolidation (8 loads + 1 rebound)	ASTM D2435	\$500.00	each
Consolidation (additional loads)	ASTM D2435	\$80.00	each
Expansion Index	ASTM D4829	\$200.00	each
Hydraulic Conductivity, Flexible Wall Permeability	ASTM D5084	\$420.00	each
Lime-Treated Unconfined Compression	CTM 373	\$800.00	each
Moisture Content	ASTM D2216	\$40.00	each
Organic Content	ASTM D2974	\$100.00	each
Particle-Size Distribution - Hydrometer	ASTM D7928	\$165.00	each
Particle-Size Distribution - Sieve Analysis	ASTM D6913	\$115.00	each
Resistance "R" Value - Laboratory Lime-Treated	ASTM D2844, CTM 301	\$320.00	each
Resistance "R" Value - Untreated	ASTM D2844, CTM 301	\$275.00	each
Sieve Analysis - Passing No. 200 only	ASTM D1140	\$100.00	each
Specific Gravity of Soils	ASTM D854	\$140.00	each
Thermal Resistivity	ASTM D5334	\$80.00	each
Triaxial Compression Test, 1 point - Remolded	ASTM D4767	\$335.00	each
Triaxial Compression Test, 1 point - Undisturbed	ASTM D4767	\$260.00	each
Triaxial Compression Test, 3 Pt. Staged - Remolded	ASTM D4767	\$410.00	each
Triaxial Compression Test, 3 Pt. Staged - Undisturbed	ASTM D4767	\$315.00	each
Unconfined Compression Test	ASTM D2166	\$110.00	each
Unit Weight/Moisture Content - Tube Sample	ASTM D2937/D2216	\$40.00	each

**AGGREGATE**

Aggregate Unit Weight	ASTM C29	\$60.00	each
Clay Lumps and Friable Particles	ASTM C142	\$160.00	per size
Cleanness Value	CTM 227	\$170.00	each
Durability Index (Coarse or Fine)	CTM 229	\$170.00	each
Flat and Elongated Particles in Coarse Aggregate	ASTM D4791	\$120.00	per size
Fractured/Crushed Particles	ASTM D5821, CTM 205, AASHTO T335	\$120.00	per size
Moisture Content (Oven)	AASHTO T329	\$40.00	each
Organic Impurities in Fine Aggregates	ASTM C40	\$65.00	each
Resistance "R" Value - Aggregate	CTM 301	\$320.00	each
Sand Equivalent, 1 point	CTM 217, AASHTO T176	\$105.00	each
Sand Equivalent, 3 points	CTM 217, AASHTO T176	\$140.00	each
Sieve Analysis - Coarse or Fine	ASTM C136, CTM 202, AASHTO T27	\$115.00	each
Sieve Analysis - Passing No. 200 only	ASTM C117, AASHTO T11	\$100.00	each
Sodium Sulfate Soundness	ASTM C88, CTM 214	\$170.00	per size
Specific Gravity and Absorption (Coarse or Fine)	ASTM C127, C128	\$130.00	each

**ASPHALT CONCRETE**

Asphalt Content (Ignition Oven)	CTM 382, AASHTO T308	\$270.00	each
Asphalt Content Correction Factor Development	CTM 382, AASHTO T308	\$520.00	each
Hveem Compacted Unit Weight, 1 point	ASTM D1560/D2726		
	CTM 304/308, AASHTO T166	\$115.00	each
Laboratory Test Maximum Density (LTMD), 5 points	CTM 375	\$360.00	each
Sieve Analysis of AC Aggregate (Coarse and Fine)	ASTM D5444, CTM 202, AASHTO T30	\$185.00	each
Stabilometer Value, 1 point	CTM 366	\$140.00	each
Theoretical Maximum Density	ASTM D2041, CTM 309, AASHTO T209	\$165.00	each
Thickness of AC Cores	ASTM D3549	\$25.00	each
Unit Weight of AC Cores	CTM 308, AASHTO T166/T275	\$65.00	each



## LABORATORY SERVICES

**CONCRETE**

Compression Test, Concrete Cylinder	ASTM C39	\$30.00	each
Compression Test, Concrete Cylinder - Hold	ASTM C39	\$27.00	each
Compression Test, Concrete Core	ASTM C42, C39	\$85.00	each
Compression Test, Shotcrete Core	ASTM C42, C39	\$115.00	each
Compression Test, High Strength Grout	ASTM C1107/C109	\$45.00	each
Concrete Cylinder Mold		\$7.00	each
Density / Unit Weight of Concrete	ASTM C567, C642	\$100.00	each
Flexural Strength Test, Concrete Beam	ASTM C78	\$115.00	each
Laboratory Drying Shrinkage Test, per beam	ASTM C157, AASHTO T160	\$300.00	each
Splitting Tensile Test, Concrete Cylinder	ASTM C496	\$85.00	each

**MASONRY**

Brick			
Compression Test	ASTM C67	\$70.00	each
Modulus of Rupture	ASTM C67	\$80.00	each
Absorption	ASTM C67	\$95.00	each
Concrete Masonry Unit			
Compression Test	ASTM C140	\$90.00	each
Absorption & Moisture Content	ASTM C140	\$90.00	each
Linear Drying Shrinkage	ASTM C426	\$225.00	each
Compression Test, Composite Masonry Prism	ASTM C1314	\$150.00	each
Compression Test, Masonry Grout	ASTM C1019	\$45.00	each
Compression Test, Mortar	ASTM C780/C109	\$40.00	each
Core Shear Test	CBC Section 2105A	\$95.00	each

**STEEL**

Anchor Bolt Tensile Test	ASTM F606	\$115.00	each
Fireproofing Density Test	ASTM E605	\$100.00	each
High Strength Bolt Assembly Laboratory Testing			
Bolt - Wedge Tension Test	ASTM F606	\$95.00	each
Bolt - Proof Load Test	ASTM F606	\$95.00	each
Bolt - Hardness Test	ASTM E18	\$45.00	each
Nut - Proof Load Test	ASTM F606	\$95.00	each
Nut - Hardness Test	ASTM E18	\$45.00	each
Washer - Hardness Test	ASTM E18	\$45.00	each
Prestressing Steel Strand Tensile Test	ASTM A416/A1061	\$400.00	each
Reinforcing Steel (Rebar) Tensile Test			
Up to No. 7	ASTM A615, A706/A370	\$95.00	each
From No. 8 through No. 14	ASTM A615, A706/A370	\$125.00	each
Reinforcing Steel (Rebar) Bend Test	ASTM A615, A706/A370	\$50.00	each
Structural Steel Tensile Test			
Up to 3/4"	ASTM A370	\$110.00	each
Sizes Larger Than 3/4"	ASTM A370	\$125.00	each
Machining of Test Specimens		cost plus 20%	
Structural Steel Hardness Test	ASTM E18	\$85.00	each
Weld Assembly, Guided Bend/Macroetch/T-Bend Test	AWS D1.1, ASTM E190	\$85.00	per test
Welder Qualification Test Inspection		\$95.00	per hour
Welder Qualification Test Record		\$100.00	each

**TESTING SERVICES**

Laboratory Technician		\$100.00	per hour
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