



CITY OF WHEATLAND

CITY COUNCIL MEETING STAFF REPORT

September 24, 2024

SUBJECT: Consideration and Adoption of Resolution Authorizing Execution of Agreement with Blackburn Consulting for Geotechnical Services Related to Emergency Repairs to Wheatland Corporation Yard

PREPARED BY: Bill Zenoni, City Manager

Recommendation

Staff recommends that the Wheatland City Council consider adoption of a resolution authorizing execution of an agreement with Blackburn Consulting for geotechnical services related to emergency repairs to Wheatland Corporation Yard

Background/Discussion

On April 11, 2024, the City's Public Works staff discovered a hole in the pavement just outside of a shop building at the northwest corner of the City's Corporation Yard located at 208 4th Street.



After discovering the hole and void, staff removed a small area of asphalt paving around the original hole which revealed a very large and deep void with tunnels extending beneath the shop building foundation and under the asphalt parking lot into the corporation yard. It appears that surface stormwater has found its way to an abandoned well and has eroded soil through the well.



Over the past several months, staff and the City Engineer have been working with the City's insurance carrier to review the damage, determine the level of insurance coverage for repair work and develop a corrective action plan. The City is responsible for a \$25,000 deductible on all claims filed. We have recently been notified that the City's property insurance carrier will provide reimbursement for the necessary repair costs with the exception of the deductible amount.

The next step in the remediation process is to have a geotechnical engineering firm document the extent of the damage and develop a repair plan. Blackburn Consulting has been assisting the City Engineer in the preliminary analysis of the site damage and has submitted a proposal to assist with the development of the repair plan and provide observation of the repair activity. The cost of this service is \$39,342. It is anticipated that a repair plan will be completed within the next several weeks. At that time, bids for the repair work will be solicited. It is staffs intent to have the damage repaired before the onset of the winter rains.

Fiscal Impact

The costs associated with repair of the Corporation Yard sinkhole will be reimbursed by the City's property insurance carrier, less a \$25,000 deductible amount.

Attachments

1. Resolution
2. Agreement

**WHEATLAND CITY COUNCIL
RESOLUTION NO. 42-24**

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WHEATLAND
AUTHORIZING EXECUTION OF AN AGREEMENT WITH BLACKBURN
CONSULTING FOR GEOTECHNICAL SERVICES RELATED TO EMERGENCY
REPAIRS TO THE WHEATLAND CORPORATION YARD**

WHEREAS, a large sinkhole was discovered at the City Corporation Yard located at 208 4th Street; and

WHEREAS, City of Wheatland staff and the City Engineer have been working diligently to develop a plan to repair this damage; and

WHEREAS, the City's property insurance will cover costs associated with these repair efforts, less a deductible amount of \$25,000; and

WHEREAS, Blackburn Consulting has submitted a proposal to provide required geotechnical services associated with this repair effort; and

NOW, THEREFORE, BE IT RESOLVED AND DETERMINED by the City Council of the City of Wheatland that:

A. The foregoing recitals are true and correct.

B. The City Manager is authorized to execute an agreement with Blackburn Consulting for geotechnical services related to emergency repairs to the Wheatland Corporation Yard in an amount not to exceed \$39,342.

* * * * *

PASSED AND ADOPTED by the City Council of City of Wheatland on this 24th day of September 2024, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

APPROVED:

Rick West, Mayor

ATTEST:

Lisa Thomason, City Clerk

**CITY OF WHEATLAND
SERVICES AGREEMENT**

THIS AGREEMENT is entered into as of the date last signed and dated below by and between **City of Wheatland**, a California municipal corporation ("City"), and **Blackburn Consulting**, a California Limited Liability Company ("Contractor"), who agree as follows:

1. Scope of Work. Contractor shall perform the work and render the services described in the attached Exhibit A (the "Work"). Contractor shall provide all labor, services, equipment, tools, material and supplies required or necessary to properly, competently and completely perform the Work. Contractor shall determine the method, details and means of doing the Work.

2. Payment.

a. City shall pay to Contractor a fee based on:

Contractor's time and expenses necessarily and actually expended or incurred on the Work in accordance with Contractor's fee schedule on the attached Exhibit A.

The fee arrangement described on the attached Exhibit A.

The total fee for the Work shall not exceed \$39,342. There shall be no compensation for extra or additional work or services by Contractor unless approved in advance in writing by City. Contractor's fee includes all of Contractor's costs and expenses related to the Work.

b. At the end of each month, Contractor shall submit to City an invoice for the Work performed during the preceding month. The invoice shall include a brief description of the Work performed, the dates of Work, number of hours worked and by whom (if payment is based on time), payment due, and an itemization of any reimbursable expenditures. If the Work is satisfactorily completed and the invoice is accurately computed, City shall pay the invoice within 30 days of its receipt.

3. Term.

a. This Agreement shall take effect on the above date and continue in effect until completion of the Work, unless sooner terminated as provided below. Time is of the essence in this Agreement. If Exhibit A includes a Work schedule or deadline, then Contractor must complete the Work in accordance with the specified schedule or deadline, which may be extended by City for good cause shown by Contractor. If Exhibit A does not include a Work schedule or deadline, then Contractor must perform the Work diligently and as expeditiously as possible, consistent with the professional skill and care appropriate for the orderly progress of the Work.

b. This Agreement may be terminated at any time by City upon 10 days advance written notice to Contractor. In the event of such termination, Contractor shall be fairly compensated for all work performed to the date of termination as calculated by City based on the above fee and payment provisions. Compensation under this subsection shall not include any termination-related expenses, cancellation or demobilization charges, or lost profit associated

and irrevocable license to use, reuse, reproduce, publish, display, broadcast and distribute the Work Product and to prepare derivative and additional documents or works based on the Work Product. If City reuses or modifies any Work Product for a use or purpose other than that intended by the scope of work under this Agreement, then City shall hold Contractor harmless against all claims, damages, losses and expenses arising from such reuse or modification. For any Work Product provided to City in paper format, upon request by City at any time (including, but not limited to, at expiration or termination of this Agreement), Contractor agrees to provide the Work Product to City in a readable, transferable and usable electronic format generally acknowledged as being an industry-standard format for information exchange between computers (e.g., Word file, Excel spreadsheet file, AutoCAD file).

8. Confidentiality of Information.

a. Contractor shall keep in strict confidence all confidential, privileged, trade secret, and proprietary information, data and other materials in any format generated, used or obtained by the City or created by Contractor in connection with the performance of the Work under this Agreement (the "Confidential Material"). Contractor shall not use any Confidential Material for any purpose other than the performance of the Work under this Agreement, unless otherwise authorized in writing by City. Contractor also shall not disclose any Confidential Material to any person or entity not connected with the performance of the Work under this Agreement, unless otherwise authorized in advance in writing by City. If there is a question if Confidential Material is protected from disclosure or is a public record or in the public domain, the party considering disclosure of such materials shall consult with the other party concerning the proposed disclosure.

b. Contractor, and its officers, employees, agents, and subcontractors, shall at all times take all steps that are necessary to protect and preserve all Confidential Material. At no time shall Contractor, or its officers, employees, agents, or subcontractors in any manner, either directly or indirectly, use for personal benefit or divulge, disclose, or communicate in any manner, any Confidential Material to any person or entity unless specifically authorized in writing by the City or by order of a court or regulatory entity with jurisdiction over the matter. Contractor, and its officers, employees, agents, and subcontractors shall protect the Confidential Material and treat it as strictly confidential in accordance with applicable law, City policies and directives, and best industry security practices and standards.

c. If any person or entity, other than City or Contractor, requests or demands, by subpoena, discovery request, California Public Records Act request or otherwise, Confidential Material or its contents, the party to whom the request is made will immediately notify the other party, so that the parties may collectively consider appropriate steps to protect the disclosure of those materials. The parties agree to take all steps reasonably necessary to preserve the confidential and privileged nature of the Confidential Material and its content. In the event that the parties cannot agree whether to oppose or comply with a disclosure demand, the opposing party may oppose the demand at its sole cost and expense, in which event the party favoring disclosure will refrain from disclosing the demanded Confidential Material until such time as a final agreement regarding disclosure is reached or, if an agreement is not reached, a judicial determination is made concerning the demand.

d. Unless otherwise directed in writing by the City, upon contract completion or termination, Contractor must destroy all Confidential Materials (written, printed and/or

*Required only if Contractor is a licensed engineer, land surveyor, geologist, architect, doctor or attorney.

a. **Other Requirements.** The general and automobile liability policy(ies) shall be endorsed to name City, its officers, employees, volunteers and agents as additional insureds regarding liability arising out of the Work. Contractor's coverage shall be primary and apply separately to each insurer against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability. City's insurance or self-insurance, if any, shall be excess and shall not contribute with Contractor's insurance. Each insurance policy shall be endorsed to state that coverage shall not be canceled, except after 30 days (10 days for non-payment of premium) prior written notice to City. Insurance is to be placed with admitted insurers with a current A.M. Best's rating of A-VII or better unless otherwise acceptable to City. Workers' compensation insurance issued by the State Compensation Insurance Fund is acceptable. Contractor agrees to waive subrogation that any insurer may acquire from Contractor by virtue of the payment of any loss relating to the Work. Contractor agrees to obtain any endorsement that may be necessary to implement this subrogation waiver. The workers' compensation policy must be endorsed to contain a subrogation waiver in favor of City for the Work performed by Contractor.

b. **Proof of Insurance.** Upon request, Contractor shall provide to City the following proof of insurance: (a) certificate(s) of insurance evidencing this insurance; and (b) endorsement(s) on ISO Form CG 2010 (or insurer's equivalent), signed by a person authorized to bind coverage on behalf of the insurer(s), and certifying the additional insured coverage.

12. Entire Agreement; Amendment. The parties intend this writing to be the sole, final, complete, exclusive and integrated expression and statement of the terms of their contract concerning the Work. This Agreement supersedes all prior oral or written negotiations, representations, contracts or other documents that may be related to the Work, except those other documents (if any) that are expressly referenced in this Agreement. This Agreement may be amended only by a subsequent written contract approved and signed by both parties.

13. Independent Contractor. Contractor's relationship to City is that of an independent contractor. All persons hired by Contractor and performing the Work shall be Contractor's employees or agents. Contractor and its officers, employees and agents are not City employees, and they are not entitled to City employment salary, wages or benefits. Contractor shall pay, and City shall not be responsible in any way for, the salary, wages, workers' compensation, unemployment insurance, disability insurance, tax withholding, and benefits to and on behalf of Contractor's employees. Contractor shall, to the fullest extent permitted by law, indemnify City, and its officers, employees, volunteers and agents from and against any and all liability, penalties, expenses and costs resulting from any adverse determination by the federal Internal Revenue Service, California Franchise Tax Board, other federal or state agency, or court concerning Contractor's independent contractor status or employment-related liability.

14. Subcontractors. No subcontract shall be awarded nor any subcontractor engaged by Contractor without City's prior written approval. Contractor shall be responsible for requiring and confirming that each approved subcontractor meets the minimum insurance requirements specified in Section 11 of this Agreement. Any approved subcontractor shall

and deliver this Agreement and documents necessary to perform it, including task orders and amendments, in any number of original or facsimile counterparts. When each Party has signed and delivered at least one counterpart to the other Party, each counterpart shall be deemed an original and, taken together, the counterparts shall constitute one and the same document, which shall be binding and effective.

City of Wheatland:

Dated: _____

By: _____
Bill Zenoni
City Manager

Blackburn Consulting:

Dated: September 18, 2024

By:  PE, GE 2818

Haze Rodgers
Director of Geotechnical Services

Auburn Office:
11521 Blocker Drive, Ste 110
Auburn, CA 95603
(530) 887-1494



West Sacramento (916) 375-8706
Fresno (559) 438-8411

File No. 2871.X007
August 21, 2024

Dane Schilling, PE
Supervising Engineer
Coastland
11641 Blocker Drive, Suite 170
Auburn, CA 95603

Subject: PROPOSAL FOR GEOTECHNICAL SERVICES, Rev2
208 4th Street
Wheatland, California

Dear Mr. Schilling,

Blackburn Consulting (Blackburn) prepared this proposal at your request to provide geotechnical services for the 208 4th Street Project in Wheatland, California (Site). This proposal contains a brief Project Understanding, our Scope, Fee, Schedule, and Agreement.

PROJECT UNDERSTANDING

We understand a void has formed below the eastern portion of the shop/warehouse building. The depth of the void is estimated to be up to 20 feet deep in some locations and has severely undermined the eastern perimeter footing and floor slab of the shop/warehouse building. We provide the following scope of services to provide geotechnical recommendations for repair of the void and to re-establish foundation support of the shop/warehouse building.

SCOPE

Blackburn will perform the following tasks:

Task 1: Site Visit, Consultation, Memo, and Utility Location (Completed)

Blackburn visited the site on April 12, 2024, to observe the void conditions. We provided consultation and prepared a Memo (dated April 17, 2024) with preliminary recommendations for a geotechnical investigation and repair of the void.

Blackburn participated in a meeting on July 9, 2024, with Coastland, the City of Wheatland's (City) Insurer, and consulted with the Insurer's independent geotechnical consultant.

Blackburn hired and coordinated with Subtronic Corporation (Subtronic) to survey and mark underground utilities at the site on July 10, 2024.

Task 2: Document Review, Coordination, and Consultation

Blackburn will:

- Review as-built plans and other documents (as provided by you).
- Coordinate with City of Wheatland facility staff, and Coastland.
- Contact Yuba County to determine if any County well records exist at the site.
- Consult with Coastland and City of Wheatland to prepare:
 - Description of repair including anticipated appropriate methods, required minimum performance criteria (settlement, compressive strength, extents, etc.).
 - Draft performance specification for grout/ Controlled Low Strength Material (CLSM)
 - Review repair plans and specifications
 - Review RFP

Task 3: Services During Repair

Task 3A: Consultation, Observation, and Materials Testing

Blackburn proposes the following services during Repair:

- Three (3) 1-hour virtual meetings to discuss feasible repair alternatives and review design specifications and plans prepared by others.
- As-needed consultation during bidding and contracting (4-hours).
- Review contractor submittals, RFI's, and workplans (2-hours).
- As-needed consultation during construction (4-hours)
- Full-time observation and documentation during placement of grout/CLSM (Assumes five 8-hour days). Specifically, Blackburn's field technician/engineer will observe and record the following as appropriate:
 - Batch tickets/Mix Proportions
 - Injection/ placement locations
 - Material volumes (take)
 - Injection pressures
 - Grout specific gravity
- Collect 12 CLSM samples for compression testing (2 sets of six).
- Collect 12 grout samples for compression testing (2 sets of six).
- Compression testing of CLSM [8 tests (2 each at 7, and 28 days)].
- Compression testing of grout cubes [8 tests (2 each at 7, and 28 days)].

We exclude:

- Testing of hot-mix asphalt, aggregate base, structural steel, and reinforcing steel inspection
- Structural concrete sampling and compression testing.
- Site-specific health and safety plan, temporary shoring or contractors means and methods. Site safety is the City and selected contractor's responsibility. In the absence of a safety plan and



foundation shoring that no one should enter the void and insertion of equipment is at the operator's risk.

We can provide an estimate for these services upon request.

Task 3B: Summary Letter

Blackburn will prepare a letter summarizing our field technician/engineer's observations, measurements, and compression test results upon completion of the repair and testing.

FEE

We will provide our services outlined above for the following fees:

Task 1 = \$15,786 (Completed)
Task 2 = \$ 4,165
Task 1 and 2 Total = \$19,951
Task 3A = \$17,404 (Estimate)
Task 3B = \$ 1,988
Task 3 Total = \$19,392
Grand Total = \$39,342

Our estimated fees for Task 3 are based on our understanding of likely repairs, estimated volume of grout/CLM required to fill the void (which is unknown), and experience with similar projects. The actual amount of time, number and duration of site visits, and tests are dependent upon multiple things beyond our control including the contractors schedule, means and methods, weather, actual void size. An itemized fee estimate is attached and our 2024 Fee Schedule. We will not exceed our authorized fee without a change in scope and your written authorization.

SCHEDULE

We can begin providing our services immediately. We will review available documents and prepare draft repair description and performance specification 2-3 weeks after executed agreement.

AGREEMENT

If the above scope, fee, and schedule are acceptable, please forward an agreement for our review. We look forward to working with you. Please call if you have questions or require additional information.

Sincerely,

BLACKBURN CONSULTING

Haze M. Rodgers, P.E., G.E.
Geotechnical Director

Attached: Fee Itemization
2024 Fee Schedule

Auburn Office:
 11521 Blocker Drive, Suite 110
 Auburn, CA 95603
 (530) 887-1494



Fresno Office: (559) 438-8411
West Sacramento Office: (916) 375-8706

Fee Itemization for Geotechnical Services, rev1
208 4th Street Project
 Wheatland, CA

August 21, 2024

File No. 2871.007

Task	Item	Quantity	Rate	Unit	Mult.	Item cost	Task Subtotal
Task 1: Site Visit, Consultation, Memo, and Utility Location (Completed)							
	Principal	16	\$330	hour	1.	\$ 5,280	
	Sr. Project Manager	4	\$285	hour	1.	\$ 1,140	
	Project Engineer II	28	\$210	hour	1.	\$ 5,880	
	Contract Administrator	3	\$195	hour	1.	\$ 585	
	Yuba County Boring Permit	1	\$1,300	lump	1.2	\$ 1,560	
	Private Utility Locator	1	\$984	lump	1.2	\$ 1,181	
	Mileage	160	\$1.00	mile	1.	\$ 160	
							\$ 15,786
Task 2: Document Review, Coordination, and Consultation							
	Principal	2	\$330	hour	1.	\$ 660	
	Project Engineer II	16	\$210	hour	1.	\$ 3,360	
	Project Assistant	1	\$145	hour	1.	\$ 145	
							\$ 4,165
						Task 1 and 2 Total	\$ 19,951
Task 3: Services during Repair							
Task 3A: Consultation, Observation, and Materials Testing							
	Principal	12	\$330	hour	1.	\$ 3,960	
	Project Engineer II	14	\$210	hour	1.	\$ 2,940	
	Construction Manager	2	\$260	hour	1.	\$ 520	
	PW Tester/Inspector Group III	40	\$205	hour	1.	\$ 8,200	
	CLSM Compression Tests	12	\$50	test	1.	\$ 600	
	Grout Compression Tests	12	\$72	test	1.	\$ 864	
	Mileage	320	\$1.00	mile	1.	\$ 320	
							\$ 17,404
Task 3A: Summary Letter							
	Principal	2	\$330	hour	1.	\$ 660	
	Project Engineer II	4	\$210	hour	1.	\$ 840	
	CAD/GIS	2	\$195	hour	1.	\$ 390	
	Contract Administrator	0.5	\$195	hour	1.	\$ 98	
							\$ 1,988
						Task 3 Total	\$ 19,392
						Grand Total	\$ 39,342

Auburn Main Office:
 11521 Blocker Drive, Suite 110
 Auburn, CA 95603
 (530) 887-1494, Fax (530) 887-1495

West Sacramento Office:
 2491 Boatman Avenue
 West Sacramento, CA 95691
 (916) 375-8706, Fax (916) 375-8709

Fresno Office:
 4186 W. Swift Avenue, Suite 107
 Fresno, CA 93722
 (559) 438-8411, Alt. (559) 276-4246



www.blackburnconsulting.com

2024 SCHEDULE OF FEES & SERVICES

Geotechnical ▪ Geo-Environmental ▪ Construction Services ▪ Forensics ▪ □ Laboratory

PROFESSIONAL HOURLY RATES:

Project Engineer / Geologist I	\$195	CAD/GIS	\$190
Project Engineer / Geologist II	\$210	Lab Aide	\$130
Senior Engineer / Geologist	\$230	Lab Manager	\$195
Project Manager	\$255	Field Services Manager	\$220
Construction Manager	\$260	Clerical	\$115
Senior Project Manager	\$285	Project Assistant	\$145
Principal / Senior Consultant	\$330	Administrative	\$175
Senior Principal	\$375	Senior Administrative	\$195

SPECIAL INSPECTION PERSONNEL HOURLY RATES:

	Non-Prevailing Wage	Prevailing Wage
Group 1 <i>ASNT Level II-III, DSA Shotcrete, Lead Inspector, NICET Level IV</i>	\$170	\$225
Group 2 <i>AWS-CWI, ICC Certified Structural Inspector, NICET Level III, Building/Construction Inspector, Shear Wall/Floor System Inspector</i>	\$170	\$220
Group 3 <i>Soils/Asphalt, Earthwork Grading, Excavation and Backfill, NICET Level II</i>	\$150	\$205

MINIMUM BASIC CHARGES:

Outside Equipment & Services	Cost plus 20%
Vehicle Charge	\$8.00 per hour or \$1.00 per mile
Per Diem	Location specific, minimum \$185 per night
Technician Services	Charge includes time from office and return to office, minimum charge - 4 hours
Overtime	Over 8 hours: 1.5 x Hourly Rate Before 7:00am or after 4:00pm: 1.5 x Hourly Rate Rush Charge (less than 24 hours notice): 1.5 x Hourly Rate Saturday: 1.5 x Hourly Rate (minimum: 4 hr. increments) Sunday & Holiday: 2.0 x Hourly Rate (minimum: 4 hr increments)

EQUIPMENT: (personnel not included)

Hand Sampling Equipment	\$348 / Day	Double Ring Infiltrometer Equipment	\$386 / Day
Nuclear Moisture/Density Testing	\$23 / Test	Level Survey Equipment	\$330 / Day
6" Sand Cone Testing	\$60 / Test	Pachometer	\$168 / Day
12" Sand Cone Testing	\$242 / Test	Rock Point Load Test Equipment	\$168 / Day
Coring Bit Charge	\$60 / Core	Roto Hammer	\$163 / Day
Coring Machine	\$336 / Day	Schmidt Hammer	\$138 / Day
Dynamic Cone Penetrometer	\$348 / Day	Torque Wrench	\$94 / Day
Electrical Resistivity Equipment	\$318 / Day	Seismic Refraction: 12 / 24 Channel	\$597 / Day
Generator	\$94 / Day	MASW Survey Equipment	\$597 / Day
Groundwater Level Indicator	\$88 / Day	Traffic Control/Safety	\$386 / Day
Inclinometer Survey Equipment	\$809 / Day	Concrete Vapor Emission Test Kit	\$50 / Ea
pH Test Strip Package	\$74 / Ea	Pull Testing Equipment	\$212 / Day
PID (MiniRAE)	\$100 / Day or \$300 / Week		

12/7/2023

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 11521 Blocker Drive, Suite 110
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www.blackburnconsulting.com

2024 LABORATORY FEE SCHEDULE

Geotechnical ▪ Geo-Environmental ▪ Construction Services ▪ Forensics ▪ Laboratory

Page 1 of 2

SOIL CLASSIFICATION		
#200 Sieve Wash	ASTM D1140	\$156
Sieve Analysis to #200	ASTM D6913, CAL 202	\$240
Standard Hydrometer with Sieve Analysis	ASTM D422	\$472
Plasticity Index	ASTM D4318	\$343
Specific Gravity - Soils	AASHTO T100	\$149
Organic Matter	ASTM D2974	\$31
MOISTURE / DENSITY		
Moisture Content	ASTM D2216, CT 226, AASHTO T329	\$56
Moisture/Density		\$106
SOIL COMPACTION		
Standard Proctor (4" or 6" mold)	ASTM D698	\$430
Modified Proctor (4" or 6" mold)	ASTM D1557	\$430
California Impact	CAL 216	\$430
Check Point (Standard or Modified)		\$199
VOLUME CHANGE		
One-Dimensional Consolidation	ASTM D2435	\$679
<i>(6 load increments, includes 2 time rate curves and 2 rebound decrements)</i>		
Additional Load or Rebound Decrement (each)		\$47
Additional Time Rate Curves (each)		\$147
Expansion Index	ASTM D4829	\$412
One-Dimensional Settlement Swell	ASTM D4546	\$304
STRENGTH		
Unconfined Compression	ASTM D2166	\$199
Compression, Rock <i>Prep & Photos included</i>	ASTM D7012	\$231
Rock Point Load	ASTM D5731	\$94
California Bearing Ratio (CBR), with curve	ASTM D1883	\$1,057
California Bearing Ratio (CBR), without curve	ASTM D1883	\$634
Resistance Value	CAL 301	\$467
Direct Shear: (per point)		
Undisturbed	ASTM D3080	\$267
Remolded	ASTM D3080	\$343
Triaxial Compression: (per point) Photos of failure upon request		
Undrained, Unconsolidated w/out Pore Pressure	ASTM D2850	\$242
Consolidated, Undrained w/ Pore Pressure Measurements	ASTM D4767	\$703
Consolidated, Drained		\$1,006
Consolidated, Undrained, no Pore Pressure Measurements		\$398
Specimen Remolding		\$156

* Client requests for rush testing require pre-approval and 20% surcharge.

CORROSIVITY ANALYSIS		
Corrosion Analysis Package	CAL 643, 417, 422	\$436
<i>Includes Soil Resistivity, Soil pH, Sulfates / Chlorides. Minimum size is 1,000 grams</i>		
pH	CTM643	\$56
Resistivity	CTM643	\$182
PERMEABILITY		
Flex-wall Permeability	ASTM D5084	
<i>Either Constant head or Falling Head / rising Tail Water. Method depends on soil type</i>		
Each Additional Effective Stress		\$156
Specimen Remolding		\$153
TREATED SOIL TESTS		
% Lime for Stabilization - per point (%)	ASTM D6276	\$173
pH of Soil	CTM643	\$56
Modified Proctor	ASTM D1557	\$511
Unconfined Compression Test	ASTM D5102	\$286
One Dimensional Swell	ASTM D4546	\$286
AGGREGATES		
Bulk Specific Gravity - Course & Fine Aggregate	ASTM C127 & 128, CAL 206, 207	\$149
Coarse Durability	CAL 229	\$254
Fine Durability	CAL 229	\$254
Sand Equivalent	CT 217, ASTM D2419, AASHTO T176	\$178
Cleanness Value	CAL 227	\$240
Moisture Content	CAL 226/370	\$138
Percent of Crushed Particles (per size fraction)	CAL 205, AASHTO T335	\$225
Fine Aggregate Angularity	AASHTO T304, Method A	\$225
Flat and Elongated Particles (per size)	AASHTO D 4791	\$225
Combined Grading 1" through no. 200	CAL 202/AASHTO T27	\$239
Bin Grading (First 2 Bins)	CAL 201/202	\$239
Each Bin Thereafter		\$94
LP-9 (RAP) Burn	LP-9, CT382	\$149
LA Rattler	CAL 211, AASHTO T96	\$464
Soundness of Aggregates by Sodium Sulfate		\$283
ASPHALT		
Bulk Specific Gravity - Compacted Hot Mix Asphalt	CAL 308, AASHTO T275	\$74
Theoretical Max Specific Gravity (Rice)	CAL 309, AASHTO T209	\$262
LTMD (Set of 5)	CAL 375	\$516
Binder Content		
Ignition Oven Correction Factor	CAL 382, AASHTO T308	\$442
Ignition Oven	CAL 382, AASHTO T308	\$262
Solvent	AASHTO T164	\$330
Stability (Set of 3)	CAL 366	\$460
Void Content		
With Stability and Rice	CAL 367	\$50
SuperPave Vendor Tests**		
Hamburg Wheel Track**	AASHTO T324	\$2,200
Tensile Strength Ratio (TSR) Moisture Susceptibility**	AASHTO T283	\$2,200
Superpave Bulk specific gravity (Air Voids)**	AASHTO T312/T275/T269	\$825
CONCRETE & MASONRY		
Concrete Compression Test 6" x 12" or 4" x 8"	ASTM C39	\$50
Masonry or Grout Compression		\$72
Compression Test of Cored Concrete Spec. (per core)		\$163
Compression Test of Shotcrete Cores (per core)		\$204
Other Tests Quoted Upon Request		

* Client requests for rush testing require pre-approval and 20% surcharge.

** Vendor tests subject to 20% markup

10/20/2023

Fees subject to adjustment on December 31, 2024

Blackburn Consulting