



**CONSOLIDATED ENGINEERING**  
**L A B O R A T O R I E S**

August 24, 2018

Response to Request for Proposal for  
**Special Testing & Inspection Services**  
**New Elementary School in Foster City**



Proposal Prepared for:

Mr. Kevin Sanders, Construction Project Manager  
San Mateo-Foster City School District  
1410 South Amphlett Boulevard  
San Mateo, CA 94402

Proposal Prepared by:

Mr. Bill Cale, Project Manager  
Consolidated Engineering Laboratories  
2001 Crow Canyon Road, Suite 100  
San Ramon, CA 94583  
[bcale@ce-labs.com](mailto:bcale@ce-labs.com)



**YOUR PARTNER IN QUALITY**



August 24, 2018

Mr. Kevin Sanders, Construction Project Manager  
San Mateo-Foster City School District  
1410 South Amphlett Boulevard  
San Mateo, California 94402

Via E-Mail: [ksanders@smfc.k12.ca.us](mailto:ksanders@smfc.k12.ca.us)

**Subject: *New Elementary School in Foster City, 1050 Shell Boulevard, Foster City, California 94404  
CEL #10-35272PW; GEO #84-04473-PW  
Materials Testing and Construction Inspection Services***

Dear Mr. Sanders:

Consolidated Engineering Laboratories (CEL) is pleased to submit our budget estimate proposal to provide materials testing and construction inspection services for the ***New Elementary School in Foster City project, located at 1050 Shell Boulevard in Foster City, California.*** CEL would be proud to be part of your team, helping to ensure the construction quality and success of this project.

Following are our cost estimate and scope of services. We assembled this proposal based on the following sources:

- Post-Bid Revisions generated by DSA Review Comments drawings, dated June 11, 2018;
- DSA Form 103, dated November 20, 2017.

Thank you for giving CEL the opportunity to be a part of your project team. We are committed to providing our clients the very best service possible to fulfill their testing and inspection needs, and are eager to prove this commitment to you. Should you have any questions or require additional information, please do not hesitate to contact me.

Respectfully submitted,  
**CONSOLIDATED ENGINEERING LABORATORIES**

A handwritten signature in blue ink, appearing to read "Bill Cale".

Bill Cale  
Senior Project Manager

A handwritten signature in blue ink, appearing to read "Corey T. Dare".

Corey T. Dare, P.E., G.E.  
Geotechnical Engineer

BC/CTD/clr

## **SAN MATEO-FOSTER CITY SCHOOL DISTRICT PROJECT EXPERIENCE**

Following is a list of projects that CEL has performed special inspection and material testing services for the San Mateo-Foster City School District:

<b>Job Name</b>	<b>Project Address</b>	<b>Proposal Sent Date</b>
Foster City ES Playstructure	461 Beach Park Blvd, Foster City, CA 94404	08/20/14
George Hall ES Playstructure	130 San Miguel Way, San Mateo, CA 94403	08/20/14
Horrall ES Playstructure	949 Ocean View Ave, San Mateo, CA 94401	08/20/14
Audubon ES Playstructure	841 Gull Ave, Foster City, CA 94404	08/20/14
Baywood ES Playstructure	600 Alameda de las Pulgas	08/20/14
Beresford ES Playstructure	300-28th Ave, San Mateo, CA 94403	08/20/14
North Shoreview ES Playstructure	1301 Cypress St, San Mateo, CA 94401	08/20/14
Brewer Island ES Playstructure	1151 Polynesia Dr, Foster City, CA 94404	08/20/14
Meadow Heights ES Playstructure	2619 Dolores St, San Mateo, CA 94403	08/20/14
Sunnybrae ES Playstructure	1031 South Delaware St, San Mateo, CA 94402	08/20/14
Laurel ES Playstructure	316-36th Ave, San Mateo, CA 94403	08/20/14
Parkside ES Playstructure	1685 Eisenhower St, San Mateo, CA 94403	08/20/14
San Mateo Park ES Playstructure	161 Clark Dr, San Mateo, CA 94402	08/20/14
SMFCSD Miscellaneous Concrete Testing	Various Locations - see letter extensions	10/15/15
Laurel Elementary School Shade Structure	316 36th Street San Mateo 94403	07/01/16
Bayside School Classroom Conversion	2025 Kehoe Ave, San Mateo, CA 94403	07/05/16
Meadow Heights Elementary	2619 Dolores St., San Mateo, CA 94403	10/21/16
Parkside Elementary	1685 Eisenhower Street, San Mateo, CA 94403	10/22/16
San Mateo Park Elementary	161 Clark Drive, San Mateo, CA 94403	10/23/16
Horrall Elementary	949 Ocean View Avenue, San Mateo, CA 94403	10/24/16
Turnbull Learning Center Shade Structures	715 Indian Avenue, San Mateo, CA 94401	11/22/16
T-Mobile Abbott MS SF03129A	600 36th Ave., San Mateo, CA 94403	12/02/16
North Shoreview ES Shade Structure	1301 Cypress Ave, San Mateo, CA 94401	02/15/17
Beresford ES Shade Structure	300 28th Avenue, San Mateo, CA 94403	03/16/18
Audubon ES Shade Structures	841 Gull Avenue, Foster City, CA 94404	03/16/18
Park Elementary School Fencing Project	161 Clark Drive, San Mateo, CA 94402	06/21/18
Borel Middle School Fencing Project	425 Brneson Avenue, San Mateo, CA 94402	06/21/18
Parkside ES Restroom Portable & Interior Restrooms Project	1865 Eisenhower Street, San Mateo, CA 94403	06/27/18
Highlands ES Shade Structures	2320 Newport Street, San Mateo, CA 94402	07/20/18



## SELECTED REFERENCES

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- Alex Kristal
- Robert Price
- Neil Brodhead



## Statement of Qualifications

Firm Name: **Quality Assurance Engineering  
dba Consolidated Engineering Laboratories (CEL)  
Corporation**  
 Website: [www.ce-labs.com](http://www.ce-labs.com)  
 Years in Business: **33**  
 President/CEO: **Gary M. Cappa**  
 E-Mail: [gcappa@ce-labs.com](mailto:gcappa@ce-labs.com)  
 Chief Operating Officer: **Jim Backman**  
 E-Mail: [jbackman@ce-labs.com](mailto:jbackman@ce-labs.com)  
 Project Manager: **Bill Cale**  
 E-Mail: [bcale@ce-labs.com](mailto:bcale@ce-labs.com)

**Corporate Office:**  
 2001 Crow Canyon Road, Suite 100  
 San Ramon, California 94583  
 T: 925.314.7100|F: 925.855.7141

**Sacramento Office and Laboratory:**  
 5304 Roseville Road, Suite K  
 North Highlands, California 95660  
 T: 916.334.6995|F: 916.334.1930

**Oakland Laboratory:**  
 534 23<sup>rd</sup> Avenue  
 Oakland, California 94606  
 T: 510.436.7626|F: 510.436.7699

**Santa Rosa Office and Laboratory:**  
 7757 Bell Road  
 Windsor, California 95492  
 T: 707.838.1115|F: 707.838.1114

**Salt Lake City Office and Laboratory:**  
 2130 South 3140 West  
 Salt Lake City, Utah 84119  
 T: 801.972.8200|F: 801.972.8272

**Hawaii Office and Laboratory:**  
 99-1410 Koaha Place #C2  
 Aiea, Hawaii 96701  
 T: 808.864.5778

**Over** the last 33 years, Consolidated Engineering Laboratories (CEL) has grown to be a leader in providing quality geotechnical engineering, materials testing, and construction inspection services in the western United States. With our Corporate Headquarters in San Ramon and full-service facilities in Oakland, Santa Rosa and Sacramento, California, our testing and inspection agency is the largest in Northern California with unequalled resources and capabilities. We also have full-service offices in Salt Lake City, Utah and Honolulu, Hawaii. CEL is also part of the Atlas Technical Consultants family of companies with sister companies in Southern California, Idaho, Oregon, and Washington in the event that services are required in those areas. Overall, nearly 500 professionals working out of 18 offices in six states comprise the Atlas Technical Consultants affiliates.

### Our Core Values

- Integrity
- Honesty
- Safety
- Teamwork
- Education
- Quality
- Financial Stability

### Mission Statement

*"We are empowered to safely provide quality service at a profitable level making professional decisions based on integrity and mutual satisfaction."*





## Personnel Capabilities



**Our** deep personnel pool of 330 talented individuals includes registered civil and geotechnical engineers, quality engineers, metallurgical engineers, registered environmental assessors, multi-disciplined materials testing and inspection technicians, project managers and administrative personnel.

All of our employees operate within the following core values: safety, integrity, honesty, teamwork, education, quality and financial stability. These core values are demonstrated throughout our company and are realized through the professionalism and quality of service our clients receive on a daily basis. CEL is an equal opportunity employer with active affirmative action and in-house training programs.

We are certified and approved by many agencies including:

- California Department of Transportation (Caltrans);
- Division of the State Architect (DSA) (LEA Nos. 29, 54 and 130);
- American Association of State Highway and Transportation Officials (AASHTO);
- American Concrete Institute (ACI);
- American Construction Inspectors Association (ACIA);
- American Society for Testing and Materials (ASTM);
- California Council of Testing and Inspection Agencies (CCTIA);
- Cement and Concrete Reference Laboratory (CCRL);
- International Conference of Building Officials (ICBO);
- International Code Council (ICC);
- Office of Statewide Health Planning and Development Preapproved Laboratory (OSHPD OPL).

## Key Attributes

The following are specific attributes of which no other firm under consideration can offer:

1. CEL has staff of over 330, allowing it to provide the depth of resources to handle a project of this scope and magnitude.
2. CEL's Oakland laboratory is a state-of-the-art facility. This 24,000 sq. ft. facility is certified by Caltrans, the Division of the State Architect, OSHPD, and the Army Corp of Engineers. We are also inspected and accredited by AASHTO and AMRL.
3. CEL has a full service geotechnical engineering capability with licensed professionals and geologists and are able to augment and expand on geotechnical and environmental services should that need arise.
4. CEL Consulting, a division of CEL, is a specialized engineering group housed in Oakland to help research and resolve construction material problems. Their full staff of forensic experts and scientists has the ability to perform almost any ASTM test that is in their directory as well as develop new testing methodology that is consistent with good engineering practice. CEL Consulting also holds the prestigious ISO 17025 certification.





## Customer Focused Services

**At CEL** we realize how important your project is to your team. We work proactively and diligently with your design and construction team to develop a cost effective testing and inspection program that will help facilitate the project. It is our objective to act as an asset to the project construction team, helping the contractor to build a project in accordance with the contract documents and meet even the most aggressive construction schedule. Delivering the project *on time-under budget-built right* is what we do, time and time again. Nothing exemplifies this more than the long standing reputation that CEL has in the markets that we serve and the many long term client relationships that carry over from project to project and year to year. Some examples of major clients that we have longstanding relationships with are:

- Port of Oakland, 1986-2018
- Kaiser Hospital, 1987-2017
- Sutter Hospital, 2006-2018
- Lawrence Berkeley National Laboratory, 1994-2017
- Lawrence Livermore National Laboratory, 1991-2016
- San Francisco Unified School District, 2002-2015
- Stanford Healthcare, 2010-2018
- University of California, Berkeley, 2006-2016
- Millennium Partners, 1998-2015
- Salt Lake County, 2008-2015
- Hamilton Partners, 2008-2016
- Alexander and Baldwin, 2012-2016

Over 80% of our revenue is derived from repeat clients that we have worked with over the years.

CEL has a proactive approach to all projects. Our inspectors on-site have the confidence to handle any issue. Our staff has the knowledge to call upon all available resources in order to bring quick resolution to any issue.

From the Ownership of the organization, to the worker picking up test cylinders, CEL works as a team and will be a positive impact to this project. We will participate in any meetings our presence is requested and will bring to the table all resources required, along with an innovative approach to problem solving.





## Basic and Additional Services of Firm

**Consolidated** Engineering Laboratories (CEL) is one of few firms having the capabilities of a full-service quality assurance agency. CEL's primary focus is to provide special inspection of construction on a wide range of construction types. Our services include all the special inspection and laboratory testing of:

- Asphaltic Concrete
- Soils and Aggregates
- Reinforced Concrete
- Batch Plant Inspection
- Shotcrete
- Masonry
- Structural Steel Field Welding and Shop Fabrication Inspection
- High-Strength Bolting
- Non-Destructive Evaluation
- Fireproofing
- Firesafing
- Proofload/Torque Verification
- Anchor/Dowel Installation
- Roofing
- Waterproofing
- Wood Framing
- Mechanical Systems
- Electrical Systems



In addition to the normal range of construction inspection and testing services in the areas of soils, asphalt, asphaltic concrete, reinforcing steel, structural steel, concrete, roofing, fireproofing, electrical and mechanical, we have equipment and expertise in the following special areas:

- Geotechnical Engineering Services
- Environmental Consultation
- Storm Water Pollution Prevention Planning (SWPPP)
- Structural Investigation
- Non-Destructive Testing
- Ground-Penetrating Radar (GPR)
- Geosynthetics
- Asphaltic Cements
- Floor Flatness Testing
- Roofing Consulting
- Fire/Life Safety Systems
- Inspector of Record (IOR)





## Project Management and Coordination

**CEL** has designated Mr. Bill Cale to act as the primary Project Manager on your project. He will act as your one point contact and will work directly with the project team over the course of the project. Mr. Cale will coordinate directly with our on-site lead inspector. The utilization of these two individuals, along with the responsible engineer, Mr. Greg LeRoy, P.E., a 30-year veteran of materials testing and inspection, will keep the reporting and quality control processes of the project moving along.

Mr. Cale will manage CEL's role in the project and will ensure the Client and CEL reach a project agreement that is acceptable to both parties. CEL will ensure that the Client is comfortable with the staff assigned to the project and will offer fully certified inspectors for the tasks assigned. Mr. Cale and the inspectors will attend pre-construction meetings as requested.



Daily communication between the inspection staff and the Project Manager will ensure that issues are handled immediately and information, schedules, and expectations are known to all concerned. The on-site Lead Inspector will have the capability to act as the liaison between the Client and CEL's office. The Owner will have one point of contact for any and all questions and issues. The Lead Inspector will have the capability, with the Owner's authorization, to make day-to-day staffing assignments.

**Budget Management:** Mr. Cale will review the entire inspection budget on a bi-weekly basis. The budget update report will identify each scope and be included with each invoice. We will communicate directly with you should the subcontractor or contractor scheduling cause additional impact on the cost structure.

**Field Supervision:** Field Supervisors will periodically visit the site to ensure our personnel have everything required for the project and that they are performing to expected standards. The supervisors will follow up with the Project Manager and the Client to ensure customer satisfaction.

## REPORTING

### Award-Winning Reporting Procedure

**CEL** was awarded the *Innovative Inspection Technology Award* in October 2014 presented by the Western Council of Construction Consumers. With mobile infrastructure and custom mobile applications, CEL has made advances in increasing accuracy, efficiency, and productivity in the field and in the office. With the plethora of software available in our high tech age, more firms are looking



for new ways to harness this technology. By developing a proprietary system, and establishing clear



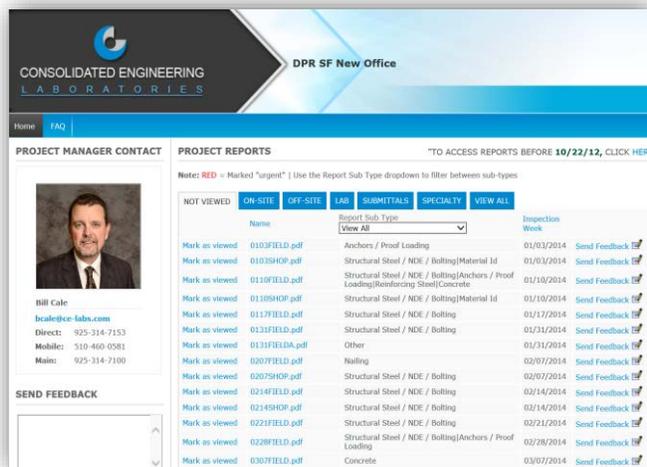


procedures, Consolidated Engineering Laboratories has given themselves an edge in an extremely competitive field, and developed an important innovation in our industry. Their solution enables testing, inspection, and reporting to be done more efficiently and accurately. This represents significant improvement over old manual methods that were inefficient, labor intensive, and prone to processing errors. CEL deserves credit for not stopping at electronic forms, a tempting advancement. Replacing a paper process with an electronic version of the same process is intuitive. However, CEL broke down the essential elements and moved the information from party to party for analysis and action without the form being the fundamental building block, allowing them to work much faster with fewer steps. Testing and Inspection can be costly to clients, principally due to time versus performance. This innovative method results in fewer jobsite delays waiting for results and reduced paper and personnel costs. CEL can pass on important time and resource savings to the Client.

**Technology:** CEL is an industry leader, integrating the newest, cutting-edge technology into all aspects of our business. Our inspectors are equipped with tablet computers as a means of reviewing drawings, RFI's, and interacting with the design and construction team.



**Reporting Method:** Our reporting method consists primarily of iPad-generated field reports left on-site, documenting the testing and inspections performed, or more importantly, listing any non-compliances or problems. Under normal circumstances, a written report, which has been reviewed by one of our engineers, is available within one week following the week of inspection. Laboratory test reports are available within three days of completion of the test.



**Electronic Reporting:** CEL utilizes a state-of-the-art electronic reporting system. Approximately 80% of all our projects are reported via electronic reporting. Our system is not just an emailed report but a complete library of all the reports on the project. Therefore, at any given time, all laboratory reports, on-site reports, off-site reports, and submittals can be reviewed by anyone who is given password-protected access to the system. A newly added feature is the ability to download any and all reports to a separate file. The system was originally designed in 2004 and was redesigned and improved in 2012. It has had four generations of improvements installed over the past four years and CEL continues to be the leader in electronic reporting.





**Budget Accountability:** A new feature that has been added is a client home screen. From this screen, the client has the ability to view all project reports including project financials. This includes the testing and inspection budget, billed-to-date, percent, and outstanding invoices with the invoice number.

The screenshot displays a client home screen with the following sections:

- FINANCIAL INFORMATION** (Note: "This information is restricted to clients only.")
  - PROJECTS DROPDOWN:** Use the drop down to change between projects and to update the fields below. (Dropdown menu: Audion Station Parking Garage)
  - PERCENT COMPLETE:** 29.00%
  - BUDGET TOTALS:**

BILLED THRU	BUDGET	CHANGES	TOTAL	TOTAL BILLINGS
10/19/2012	\$322,797.00	\$166,357.00	\$489,153.00	\$143,646.00
  - OUTSTANDING INVOICES:**

Invoice Number:	Date:	Amount:	Days Old:
087599	5/1/2012	\$10,457.27	198
087979	5/16/2012	\$4,815.92	183
088305	5/30/2012	\$11,681.55	169
089394	7/17/2012	\$9,032.10	121
089395	7/17/2012	\$7,123.46	121
089397	7/17/2012	\$6,473.36	121
089723	7/26/2012	\$487.24	112
090123	8/9/2012	\$10,491.18	98
090875	9/7/2012	\$12,727.58	69
091711	10/3/2012	\$10,578.23	43
092158	10/29/2012	\$14,885.06	17
092715	11/9/2012	\$16,911.12	6
- PROJECT REPORT SITES:**
  - 00000001 - Audion at Northern Park
  - 00000004 - Audion at Northern Park Building 1 Foundation
  - 00000005 - Audion at Northern Park Building 1 Foundation
  - 00000006 - Audion Station - Hazardous Waste Remediation (201202)
  - 00000008 - Audion Station - Superfund/Solid
  - 00000010 - Audion Station - Parking Garage
  - 00000011 - Audion Station - Residential
  - 00000012 - Audion Station - Northern Park

**Immediate Notification of Issues:** Electronic reporting, however, is not the means and methods utilized to notify personnel of non-compliance issues. On-site non-compliance issues will be immediately brought to the attention of the project team so that those issues can be addressed. Off-site non-compliances, such as low concrete breaks or issues that may take place in a shop, will be immediately identified and emailed separately from our standard reporting processes so that all of the appropriate personnel are notified immediately of any non-compliance. Reports noting non-compliances and low breaks are identified in red on the e-reports system so they stand out from the other reports.

### Problem Resolution

**We** assign technicians certified in their areas of expertise for consistent participation on each project. Additionally, on all major projects, a principal oversees communication, documentation, staffing and procedures. No other inspection agency offers this level of project involvement by a principal of the firm. Our team has an understanding of construction processes, code interpretation, and an overall ability to efficiently and effectively handle problems in the field. Furthermore, we utilize a field time ticket process to verify time on a daily basis.





Should a problem or question arise during the construction process, CEL utilizes a three-tiered system of documentation for problem resolution, as outlined below:

The image shows a 'Request For Information' form (Form ID 038 Rev.0) with a large graphic of a computer monitor displaying 'RFI' overlaid on it. The form includes fields for Project Name, CEL Project #, Project Location, Contractor, Date, DSA File #, DSA Appl #, LEA #, OSHPD #, Permit/App'l #, To, From, Attention, Question/Answers, Date, Ref. Drawings, Questions, Response, and a section for inspection status with checkboxes for 'INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED DOCUMENTS' and 'PERFORMED IN ACCORDANCE WITH THE APPROVED DOCUMENTS'. It also has a signature line for the Special Inspector and a CC field listing Project Architect, Structural Engineer, Project Inspector, DSA Regional Office, and School District.

*RFI (Request for Information):* A Request for Information form is used when there is a problem or discrepancy regarding the contract documents and a structural engineer's clarification is needed to resolve the situation. It can also be used when there is a disagreement as to what type of weld goes in a certain area, or when a weld is not detailed on a structural drawing, but our inspector feels it was intended that one be there. All Requests for Information will be directed to the Owner or the Owner's agent.

*Work-in-Progress Punch List:* When a problem occurs, a punch list is created so that the contractor is aware of any outstanding items. This punch list requires the signatures of both the inspector and the superintendent; therefore, no questions can arise as to whether or not a problem was brought to the attention of the superintendent.

*Non-Compliance Report:* This is the final step in problem resolution, and is taken only if the contractor or subcontractor has not responded to steps 1 and 2.

Used as a last resort, it is a formal notification that the work does not meet the project plans and specifications, and a resolution is required. Often, even the possibility of a non-compliance report is enough to get a problem resolved. In addition, non-compliance items are italicized in reports, and listed on the top of the first page of the report, for easy reference, and to further highlight critical matters.

## Flexibility and Reliability

**CEL** is designed to be flexible. Whatever each client's specific needs are, regarding inspection, reporting, billing or accounting, we can accommodate them in an accurate and timely manner. In fact, we are committed to meeting, or exceeding, your requirements. Our entire staff is dedicated to doing whatever it takes to assure that consistent quality is maintained for the duration of the project.

## Project Closeout

**CEL's** engineering team in conjunction with our field staff and project managers monitors all exceptions and non-conformances generated from field inspections ensuring that items are closed out prior to issuing a final affidavit. Additionally, we have specific engineers assigned to projects governed by Division of the State Architect and Office of Statewide Health Planning and Development who are experienced with the State protocols and procedures like DSA Box and OSHPD's Verified Compliance Reports. Having assigned engineers ensures that our clients receive thorough, complete and quick closeout documents when requested.





## *Quality Management System – Fully Accredited*

**Consolidated** Engineering Laboratories has established and implemented a quality management system to ensure that CEL services meet or exceed recognition and regulatory requirements and provide the highest level of quality services to our clients. CEL management is committed to meet the requirements of International Standard ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

The CEL Quality Management System meets the requirements ISO 17025:2005 by defining the organizational structure, administrative, and technical systems required to comply with the standard. CEL has developed and implemented policies and procedures relating to various aspects of the organization including document control, purchasing, subcontracting, customer service, complaints, control of non-conforming work, continual improvement, corrective and preventive action, control of records, internal audits, calibration and maintenance of equipment, education and training of employees, sampling, and reporting of results. All lab testing is performed in our fully accredited, ISO certified facility.

CEL Management is committed to providing the highest level of service to our clients by actively monitoring the effectiveness of our quality management system by measuring various aspects of the organization for continual improvement in areas including field and lab operations, accounting, reporting of results, customer satisfaction, contracts, and safety. From the development of the quality management system through the implementation and monitoring the effectiveness, CEL will consistently provide the highest quality service to our customers.





## Safety

**CEL** maintains a strong and extremely vigilant safety culture throughout the organization. Over the past 12 years CEL has created a culture which is driven around employee safety. CEL maintains **6 Core Values**, one of which is:

### SAFETY

**Safety decisions impact the lives of our employees and their families.  
Returning home safely each day is our primary responsibility.**

Our motto of **"THINK 12"** is on all of our safety vests and is a constant reminder to our employees to *"THINK 12 feet all around you. Be aware of the space above you, below you, and to the sides of you."*

Divisional safety meetings are held once a month across all of our offices and our field supervisory personnel perform random and frequent safety audits.

All of our inspection personnel will be fully equipped and trained to operate scissor lifts for all of the proofloading, fireproofing, and welding inspection activities, which will be necessitated onsite. Many of our inspection personnel will have OSHA 10 training along with other more specialized training as required by jobsite conditions. More details regarding our safety plan are available upon request.



## ASSUMPTIONS AND CLARIFICATIONS

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We assembled this proposal based on the following assumptions:

### **Batch Plant Inspections**

Although it is not listed on the DSA 103 Form provided, it is assumed periodic batch plant inspections will be required.

### **Reinforcing steel**

Although it is not listed on the DSA 103 Form provided, it is assumed that the sampling, tagging and testing of reinforcing steel will be required.

### **Structural and Miscellaneous Steel**

Steel to be fabricated in one Northern California facility running a single shift during regular business hours. Fabricator unknown.

### **Structural Concrete**

Building A – 3 pours

Building B – 6 pours

Building C – 3 pours

ALTERNATE 1 Future Classrooms – 3 pours

ALTERNATE 2 Covered Walkway – 2 pours

ALTERNATE 3 Lunch Shelter – 2 pours

### **Glu-lam Beam Inspections**

As of **July 26, 2018** there are only seven DSA-certified glu-lam inspectors on the planet. Five work for one firm (TPI), one is independent and the other employed by a competitor. This can make it challenging to arrange for inspections. Travel time, mileage and per diem charges will apply for all. It is critical to identify the fabricator, schedule and location as far in advance as possible. Typically, these factors are not known until a few weeks prior to fabrication. For these reasons, developing an accurate budget estimate can prove difficult. The attached estimate is an educated guess to the best of our ability. We will pass through the sub-consultant's invoice and include a 15% markup for reimbursable expenses.

No overtime or shift-differential time is included in this budget estimate proposal.



**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW  
BUILDINGS A, B, AND C PRICING**

Description	Quantity	Unit Rate	Subtotals	
<b>GEOTECHNICAL ENGINEER OF RECORD</b>				
Project Manager Site Meetings	16 Hours	\$ 175.00	\$ 2,800.00	
Demolition, Sampling, Mass Grading, Building Pad-Subgrade and Base	120 Hours	\$ 85.00	\$ 10,200.00	
Underground Utilities	200 Hours	\$ 85.00	\$ 17,000.00	
Subgrade and Baserock Prep for Pavement Areas and Hardscapes	80 Hours	\$ 85.00	\$ 6,800.00	
Asphalt Paving	24 Hours	\$ 85.00	\$ 2,040.00	
Foundation/Excavation Observation - Staff Engineer	24 Hours	\$ 135.00	\$ 3,240.00	
Lab, Max Density/Opt Moisture ASTM D1557	5 Each	\$ 300.00	\$ 1,500.00	
Lab, Maximum Theoretical Density ASTM D2051	3 Each	\$ 180.00	\$ 540.00	
<i>Submittal Reviews, RFI Responses, Foundation Observation, Consultation, DFR Review, Supplemental Engineering as Geotechnical Engineer of Record</i>				
Senior Engineer	28 Hours	\$ 175.00	\$ 4,900.00	
Supplemental Engineering - Staff Engineer	10 Hours	\$ 135.00	\$ 1,350.00	
Report Processing, DFR Management	8 Hours	\$ 70.00	\$ 560.00	
<b>SUBTOTAL:</b>			<b>\$ 50,930.00</b>	
<b>REINFORCED CONCRETE</b>				
Mix Design Review	3 Each	\$ 200.00	\$ 600.00	
Sampling and Tagging Reinforcing Steel	24 Hours	\$ 65.00	\$ 1,560.00	
Rebar Bend and Tensile Test	24 Each	\$ 65.00	\$ 1,560.00	
Batch Plant Inspection	48 Hours	\$ 65.00	\$ 3,120.00	
Concrete Sampling - 12 pours	96 Hours	\$ 65.00	\$ 6,240.00	
Concrete Compression Tests	105 Cylinders / 21 Sets	\$ 20.00	\$ 2,100.00	
Sample Pick-Ups	12 Trips	\$ 20.00	\$ 240.00	
<b>SUBTOTAL:</b>			<b>\$ 15,420.00</b>	
<b>STRUCTURAL AND MISCELLANEOUS STEEL</b>				
Welding Procedure Specification Review	2 Each	\$ 200.00	\$ 400.00	
Shop Fabrication Inspection - 5 weeks	200 Hours	\$ 80.00	\$ 16,000.00	
High Strength Bolt Assemblies	24 Each	\$ 210.00	\$ 5,040.00	
Field Welding Inspection - 6 weeks	240 Hours	\$ 80.00	\$ 19,200.00	
<b>SUBTOTAL:</b>			<b>\$ 40,640.00</b>	
<b>GLU-LAM FABRICATION</b>				
Wood Frabrication Inspection (Continuous) - 4 weeks	160 Hours	\$ 150.00	\$ 24,000.00	
<b>SUBTOTAL:</b>			<b>\$ 24,000.00</b>	
<b>POST-INSTALLED ANCHORS</b>				
Placement of Post-Installed Anchors	40 Hours	\$ 65.00	\$ 2,600.00	
Proofload or Torque Testing	60 Hours	\$ 65.00	\$ 3,900.00	
<b>SUBTOTAL:</b>			<b>\$ 6,500.00</b>	
<b>NON-SHRINK GROUT</b>				
Non-Shrink Grout Placement	40 Hours	\$ 65.00	\$ 2,600.00	
Non-Shrink Grout Compression Tests	15 Each / 5 Sets	\$ 20.00	\$ 300.00	
Sample Pick-Ups	5 Trips	\$ 20.00	\$ 100.00	
<b>SUBTOTAL:</b>			<b>\$ 3,000.00</b>	



**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW  
BUILDINGS A, B, AND C PRICING**

<i>Description</i>	<i>Quantity</i>	<i>Unit Rate</i>	<i>Subtotals</i>	
<b>MISCELLANEOUS</b>				
Interim Affidavit	3 Each	\$ 200.00	\$ 600.00	
Final Affidavit	1 Per Permit	\$ 400.00	\$ 400.00	
Project Engineering and Management 7%			\$ 9,904.30	
<b>SUBTOTAL:</b>				<b>\$ 10,904.30</b>
	<b>MAN-HOURS</b>	<b>1418</b>	<b>GRAND TOTAL:</b>	<b>\$ 151,394.30</b>



**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW  
ALTERNATE 1 FUTURE CLASSROOMS PRICING**

Description	Quantity	Unit Rate	Subtotals	
<b>GEOTECHNICAL ENGINEER OF RECORD</b>				
Project Manager Site Meetings	3 Hours	\$ 175.00	\$ 525.00	
Demolition, Sampling, Mass Grading, Building Pad-Subgrade and Base	16 Hours	\$ 85.00	\$ 1,360.00	
Underground Utilities	40 Hours	\$ 85.00	\$ 3,400.00	
Subgrade and Baserock Prep for Pavement Areas and Hardscapes	16 Hours	\$ 85.00	\$ 1,360.00	
Foundation/Excavation Observation - Staff Engineer	8 Hours	\$ 135.00	\$ 1,080.00	
<i>Submittal Reviews, RFI Responses, Foundation Observation, Consultation, DFR Review, Supplemental Engineering as Geotechnical Engineer of Record</i>				
Senior Engineer	6 Hours	\$ 175.00	\$ 1,050.00	
Supplemental Engineering - Staff Engineer	2 Hours	\$ 135.00	\$ 270.00	
Report Processing, DFR Management	1 Hours	\$ 70.00	\$ 70.00	
<b>SUBTOTAL:</b>			<b>\$ 9,115.00</b>	
<b>REINFORCED CONCRETE</b>				
Sampling and Tagging Reinforcing Steel	8 Hours	\$ 65.00	\$ 520.00	
Rebar Bend and Tensile Test	6 Each	\$ 65.00	\$ 390.00	
Batch Plant Inspection	12 Hours	\$ 65.00	\$ 780.00	
Concrete Sampling - 3 pours	24 Hours	\$ 65.00	\$ 1,560.00	
Concrete Compression Tests	25 Cylinders / 5 Sets	\$ 20.00	\$ 500.00	
Sample Pick-Ups	3 Trips	\$ 20.00	\$ 60.00	
<b>SUBTOTAL:</b>			<b>\$ 3,810.00</b>	
<b>STRUCTURAL AND MISCELLANEOUS STEEL</b>				
Shop Fabrication Inspection - 2 weeks	80 Hours	\$ 80.00	\$ 6,400.00	
High Strength Bolt Assemblies	12 Each	\$ 210.00	\$ 2,520.00	
Field Welding Inspection - 3 weeks	120 Hours	\$ 80.00	\$ 9,600.00	
<b>SUBTOTAL:</b>			<b>\$ 18,520.00</b>	
<b>POST-INSTALLED ANCHORS</b>				
Placement of Post-Installed Anchors	12 Hours	\$ 65.00	\$ 780.00	
Proofload or Torque Testing	24 Hours	\$ 65.00	\$ 1,560.00	
<b>SUBTOTAL:</b>			<b>\$ 2,340.00</b>	
<b>NON-SHRINK GROUT</b>				
Non-Shrink Grout Placement	24 Hours	\$ 65.00	\$ 1,560.00	
Non-Shrink Grout Compression Tests	9 Each / 3 Sets	\$ 20.00	\$ 180.00	
Sample Pick-Ups	3 Trips	\$ 20.00	\$ 60.00	
<b>SUBTOTAL:</b>			<b>\$ 1,800.00</b>	
<b>MISCELLANEOUS</b>				
Final Affidavit	1 Per Permit	\$ 400.00	\$ 400.00	
Project Engineering and Management 7%			\$ 2,518.95	
<b>SUBTOTAL:</b>			<b>\$ 2,918.95</b>	
<b>MAN-HOURS</b>	<b>396</b>		<b>GRAND TOTAL: \$</b>	<b>38,503.95</b>



**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW  
ALTERNATE 2 COVERED WALKWAY PRICING**

<i>Description</i>	<i>Quantity</i>	<i>Unit Rate</i>	<i>Subtotals</i>	
<b>GEOTECHNICAL ENGINEER OF RECORD</b>				
Project Manager Site Meetings	3 Hours	\$ 175.00	\$ 525.00	
Demolition, Sampling, Mass Grading, Building Pad-Subgrade and Base	20 Hours	\$ 85.00	\$ 1,700.00	
Underground Utilities	8 Hours	\$ 85.00	\$ 680.00	
Subgrade and Baserock Prep for Pavement Areas and Hardscapes	20 Hours	\$ 85.00	\$ 1,700.00	
Foundation/Excavation Observation - Staff Engineer	16 Hours	\$ 135.00	\$ 2,160.00	
<i>Submittal Reviews, RFI Responses, Foundation Observation, Consultation, DFR Review, Supplemental Engineering as Geotechnical Engineer of Record</i>				
Senior Engineer	3 Hours	\$ 175.00	\$ 525.00	
Supplemental Engineering - Staff Engineer	2 Hours	\$ 135.00	\$ 270.00	
Report Processing, DFR Management	1 Hours	\$ 70.00	\$ 70.00	
<b>SUBTOTAL:</b>			<b>\$ 7,630.00</b>	
<b>REINFORCED CONCRETE</b>				
Sampling and Tagging Reinforcing Steel	4 Hours	\$ 65.00	\$ 260.00	
Rebar Bend and Tensile Test	2 Each	\$ 65.00	\$ 130.00	
Batch Plant Inspection	8 Hours	\$ 65.00	\$ 520.00	
Concrete Sampling - 2 pours	16 Hours	\$ 65.00	\$ 1,040.00	
Concrete Compression Tests	15 Cylinders / 3 Sets	\$ 20.00	\$ 300.00	
Sample Pick-Ups	2 Trips	\$ 20.00	\$ 40.00	
<b>SUBTOTAL:</b>			<b>\$ 2,290.00</b>	
<b>STRUCTURAL AND MISCELLANEOUS STEEL</b>				
Shop Fabrication Inspection	40 Hours	\$ 80.00	\$ 3,200.00	
Field Welding Inspection	54 Hours	\$ 80.00	\$ 4,320.00	
<b>SUBTOTAL:</b>			<b>\$ 7,520.00</b>	
<b>MISCELLANEOUS</b>				
Final Affidavit	1 Per Permit	\$ 400.00	\$ 400.00	
Project Engineering and Management 7%			\$ 1,248.80	
<b>SUBTOTAL:</b>			<b>\$ 1,648.80</b>	
	<b>MAN-HOURS</b>	<b>195</b>	<b>GRAND TOTAL: \$</b>	<b>19,088.80</b>



**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW  
ALTERNATE 3 LUNCH SHELTER PRICING**

<i>Description</i>	<i>Quantity</i>	<i>Unit Rate</i>	<i>Subtotals</i>	
<b>GEOTECHNICAL ENGINEER OF RECORD</b>				
Project Manager Site Meetings	3 Hours	\$ 175.00	\$ 525.00	
Demolition, Sampling, Mass Grading, Building Pad-Subgrade and Base	12 Hours	\$ 85.00	\$ 1,020.00	
Underground Utilities	8 Hours	\$ 85.00	\$ 680.00	
Subgrade and Baserock Prep for Pavement Areas and Hardscapes	12 Hours	\$ 85.00	\$ 1,020.00	
Foundation/Excavation Observation - Staff Engineer	4 Hours	\$ 135.00	\$ 540.00	
<i>Submittal Reviews, RFI Responses, Foundation Observation, Consultation, DFR Review, Supplemental Engineering as Geotechnical Engineer of Record</i>				
Senior Engineer	3 Hours	\$ 175.00	\$ 525.00	
Supplemental Engineering - Staff Engineer	2 Hours	\$ 135.00	\$ 270.00	
Report Processing, DFR Management	1 Hours	\$ 70.00	\$ 70.00	
<b>SUBTOTAL:</b>			<b>\$ 4,650.00</b>	
<b>REINFORCED CONCRETE</b>				
Sampling and Tagging Reinforcing Steel	4 Hours	\$ 65.00	\$ 260.00	
Rebar Bend and Tensile Test	2 Each	\$ 65.00	\$ 130.00	
Batch Plant Inspection	8 Hours	\$ 65.00	\$ 520.00	
Concrete Sampling - 2 pours	16 Hours	\$ 65.00	\$ 1,040.00	
Concrete Compression Tests	10 Cylinders / 2 Sets	\$ 20.00	\$ 200.00	
Sample Pick-Ups	2 Trips	\$ 20.00	\$ 40.00	
<b>SUBTOTAL:</b>			<b>\$ 2,190.00</b>	
<b>STRUCTURAL AND MISCELLANEOUS STEEL</b>				
Shop Fabrication Inspection	32 Hours	\$ 80.00	\$ 2,560.00	
High Strength Bolt Assemblies	3 Each	\$ 210.00	\$ 630.00	
Field Welding Inspection	40 Hours	\$ 80.00	\$ 3,200.00	
<b>SUBTOTAL:</b>			<b>\$ 6,390.00</b>	
<b>MISCELLANEOUS</b>				
Final Affidavit	1 Per Permit	\$ 400.00	\$ 400.00	
Project Engineering and Management 7%			\$ 954.10	
<b>SUBTOTAL:</b>			<b>\$ 1,354.10</b>	
	<b>MAN-HOURS</b>	<b>145</b>	<b>GRAND TOTAL: \$</b>	<b>14,584.10</b>

**NEW ELEMENTARY SCHOOL IN FOSTER CITY  
FOSTER CITY, CALIFORNIA  
CEL #10-35272PW; GEO #84-04473-PW**

**Basis of Charges:** The proposed unit rates will be in effect through October 31, 2019. Thereafter, the unit rates are subject to an annual increase of four and one-half percent (4.5%) per year to mitigate the annual operating cost increases:

Work over 8 Hours per day	Time and One-Half
Work over 12 Hours, Monday through Friday	Double Time
Work on Saturdays	Time and One-Half
Work over 8 Hours on Saturdays	Double Time
Work on Sundays/Holidays	Double Time
Swing or Graveyard Shift Premium	\$12.50 per Hour
Work from 0-4 Hours	4-Hour Minimum Billing
Work from 4-8 Hours	8-Hour Minimum Billing
Show-Up Time	2-Hour Minimum Billing
Sample Pick-Up	\$20.00/Trip
Laboratory Testing – Rush Fee	Add 50% to Testing Cost
Technician with Nuclear Gauge	Portal-to-Portal
Final Affidavit (per permit number) (request six working days advanced notice)	\$400.00
Extra Copies (over four per issue date) of Inspection Reports and Final Affidavit	\$20.00/each
Project Engineering and Management	7% of Fees
Credit Card Payment of Fees	2.5% Premium
Reimbursables	Cost + 15%
QA/QC Plan Written Procedures	Quotation upon Request
Out of Area Services (beyond 40-mile radius)	As Listed Below:
Travel Time	Basic Hourly Rate
Mileage	\$0.60/Mile
Per-Diem, including lodging	\$120.00/Day

**QUANTITY DISCLAIMER:**

This quote outlined herein was based on the following sources:

- Post-Bid Revisions generated by DSA Review Comments drawings, dated June 11, 2018;
- DSA Form 103, dated November 20, 2017.

This proposal is limited to the scope of services, the number of inspection hours, and the number of associated tests identified herein. Any estimated quantities contained herein are estimates only and Client agrees to payment for services rendered in excess of the estimated quantities and/or cost figures as described herein.

It is recognized that additional services rendered herein under this proposal are schedule driven and are mandated by the scheduling and staffing of the contractor(s). Should items and quantities alter from estimates outlined herein, CEL shall be entitled to compensation for services rendered.

In addition, Client recognizes that, on occasion, due to the schedule of the contractor or relevant subcontractors, occasional overtime may be required. CEL typically will have no notice of this until the day the said overtime occurs. Client agrees to compensate CEL for such overtime.

## SCOPE OF SERVICES

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### **REINFORCED CONCRETE**

#### **Mix Review**

We will review the proposed concrete mixes in our laboratory for conformance with specifications.

#### **Sample, Tag and Test Reinforcing Steel**

Prior to fabrication of the steel, we will make a visit to the reinforcing steel supplier and collect mill certificates and sample reinforcing steel from the unbroken bundles. Testing will be as per American Society for Testing and Materials (ASTM) A615. Once the steel is ready for shipment, we will make another trip to the supplier and inspect to determine the steel has identical heat numbers to that already tested, and tag the steel so that it may be shipped to the job site.

#### **Batch Plant Inspection**

Our inspector will periodically check for batch weights, moisture content of aggregates, proper use of admixtures, and batching procedures.

#### **Reinforcing Steel Placement**

Will be performed by the Inspector of Record (IOR).

#### **Concrete Placement**

Will be performed by the IOR.

#### **Concrete Sampling**

Our inspector will be on-site to perform casting of (4x8) concrete cylinders for compression testing at a frequency of five cylinders for every 50 cubic yards placed.

#### **Concrete Compression Testing**

We will transport all samples to our laboratory for compression testing in strict accordance with ASTM requirements. Compression test reports will be distributed to the appropriate parties.

### **STRUCTURAL AND MISCELLANEOUS STEEL**

#### **Shop Inspection**

- Review of welding procedure specifications;
- Material identification and mill certificate review;
- Observe the utilization of certified welders and approved welding procedures;
- Visual inspection of welding to determine compliance with contract documents;
- Nondestructive testing of moment welds and column splices;
- Confirm approximate preheat temperature;
- Continuous inspection of multi-pass fillet welds, groove welds and reinforcing steel welding.

#### **Field Inspection**

- Observe the utilization of certified welders and approved procedures;
- Confirm approximate preheat temperature;



- Nondestructive testing of moment welds and column splices;
- Inspect to determine and observe proper installation and tightening of high strength bolts;
- Visual inspection of welding to determine compliance with contract documents;
- Continuous inspection of multi-pass fillet welds, groove welds and reinforcing steel welding.

### **High Strength Bolting**

Prior to installation, our inspector will confirm that fastener components are properly stored. Our inspector will perform pre-installation verification testing daily where applicable to confirm the suitability of the completed fastener assembly and confirm the procedure and proper use by the bolting crew of the pretensioning method to be used. A representative sample of not fewer than three complete fastener assemblies of each combination of diameter, length, grade and lot to be used shall be checked to confirm the proper pretension is achieved. Our inspector will then observe the pretensioning methods used are in accordance with the specifications and that joints are brought to a snug tight condition and then tightened systematically from the most rigid part of the joint. Our inspector will document the testing and observations performed and locations of accepted and rejected connections.

### **Laboratory Testing of High Strength Bolt Assemblies (ASTM A325 | A490)**

We will sample a set of three (3) high strength bolt assemblies per size, lot and heat number from sealed kegs at the supplier or steel fabrication plant. We will perform proofload, ultimate and hardness tests on the assemblies in our laboratory.

### **GLU-LAM FABRICATION**

Our inspectors will perform the following inspection services:

- Inspect to determine that the proposed lumber grades, adhesive and end-joint details meet with code requirements;
- Determine that materials with lumber-grade marks are being used;
- Measure moisture content of lumber and observe compliance with acceptance range specified;
- Determination of preservative treatment requirements;
- Inspection of gluing and curing;
- Inspection of lamination for glue spread and skips;
- Observe and record finishing procedures;
- Submit written progress reports describing the tests and inspections made and documentation of the action taken to correct non-conforming work.

### **POST-INSTALLED ANCHORS**

As required, we will perform visual examination of anchor placement to determine if post-installed anchor holes are clean, of the proper depth and diameter, and installed as specified by the manufacturer. In addition, we will perform proofload/torque testing of the anchors at the percentage defined by the plans and specifications.

**NOTE:** These estimates assume that adequate access will be provided for performing the work at maximum production, i.e., scaffolding. Should any anchor fail, additional tests will be required per plans.



## **NON-SHRINK GROUT**

### **Non-Shrink Grout Placement**

During the pours, our inspector will periodically monitor the placement. Our inspector will be performing the following duties:

- Determine the adequacy of placement and vibratory equipment;
- Observe proper delivery rate of non-shrink grout and monitor batch times;
- Observe that the correct mix is being utilized;
- Record temperature of air and concrete;
- Cast cubes for compression tests at the specified frequency.

### **Compression Testing**

We will transport all samples to our laboratory for testing in strict accordance with the American Society for Testing and Materials (ASTM) requirements. Reports of compression tests will be distributed to the appropriate parties.