251 E. MAIN STREET, MOUNTAIN HOUSE, CA 95391
(209) 831-2300 • (209) 831-5610 FAX

CONSULTANT AGREEMENT

CONTRACT ID # A-2122-05

DATE: July 1, 2021

PARTIES: MHCSD: Mountain House
Community Services District
251 E. Main Street
Mountain House, CA 95391

CONSULTANT: TRC Engineers, Inc.
183 D'Arcy Pkwy
Lathrop, CA 95207

The Parties agree as follows:

1. Priority of Documents:

Each of the items listed below is hereby incorporated into this Agreement by this reference. In the event of an inconsistency in this Agreement, the inconsistency shall be resolved by giving precedence in the following order:

A. Applicable Federal and State of California statutes and regulations, this Agreement and its exhibits.

2. Scope of Professional Services:

Scope of Services for Construction Management and Inspection will be negotiated on a Task-Order basis. For each Task-Order, the CONSULTANT shall provide a scope, budget and schedule based on the Schedule of Billing Rates, included in the attached Statement of Qualification (Attachment A). The Community Development Director will approve the Task Orders. The CONSULTANT shall not do any work prior to the written approval of the Task-Order. The total amount of Task Orders shall not exceed the total contract value. There shall be no substitution of personnel without written approval of MHCSD.

3. Term of Agreement:

This Agreement shall commence on July 1, 2021 and continue until June 30, 2022 unless said work is completed on a date prior thereto or unless terminated earlier as provided herein or otherwise extended in writing by mutual agreement of the Parties. The MHCSD General Manager is hereby authorized to negotiate such extension.

4. Compensation:

The compensation shall not exceed the amount of $700,000 for services performed pursuant to this Agreement. Payments shall be made within 30 days of receipt of invoice from CONSULTANT.

5. Standard of Performance:

CONSULTANT shall perform all Work in a first-class manner in conformance with the standards of quality normally observed by a person practicing in CONSULTANT's profession.

6. Inspection:

All Work performed and materials (if any) provided by CONSULTANT shall be subject to inspection and approval by MHCSD.

7. Invoicing:

Consultant shall submit invoices not more often than once a month during the term of this Agreement based on the cost for services performed and reimbursable costs incurred prior to the invoice date via e-mail to **mhcsdbilling@sjgov.org**. Invoices delivered to any other e-mail address will be deemed undelivered and not paid. All invoices must reference this Contract ID Number, the service performed and the Federal Tax Payer Identification Number. Each invoice shall also identify (1) total contract amount ($), (2) expenses to date ($), (3) remaining funds per contract ($), and (4) total amount due per invoice ($). Additionally, all invoices must also reference the task being billed and include the total budgeted for the task, billings to date, amount of current billing and the balance remaining. Payments will be made against invoices as submitted.

8. Consultant's Status:

In the performance of work, duties and obligations imposed by this Agreement, the CONSULTANT is at all times acting as an Independent Contractor practicing his or her profession and not as an employee of the MHCSD. CONSULTANT shall perform the CONSULTANT's work in accordance with currently approved methods and standards of practice in the CONSULTANT's professional specialty. A copy of CONSULTANT's current business license shall be provided to MHCSD. The CONSULTANT shall not have any claim under this Agreement or otherwise against MHCSD for vacation, sick leave, retirement benefits, social security or worker's compensation benefits. The CONSULTANT shall be responsible for federal and state payroll taxes such as social security and unemployment. San Joaquin County will issue a form 1099 on behalf of MHCSD at year-end for fees earned.

9. Assignments:

Inasmuch as this Agreement is intended to secure the specialized services of the CONSULTANT, CONSULTANT may not assign, transfer, delegate or subcontract their obligation herein without the prior written consent of MHCSD. Any such assignment, transfer, delegation or subcontract without the prior written consent shall be considered null and void.

10. Non-Exclusive Rights:

This Agreement does not grant to CONSULTANT any exclusive privileges or rights to provide services to MHCSD. CONSULTANT may contract with other agencies, private companies or individuals for similar services.

11. Compliance:

CONSULTANT shall comply with all Federal, State and local laws, regulations and requirements necessary for the provision of contracted services. Furthermore, CONSULTANT shall comply with all laws applicable to wages and hours of employment, occupational safety, and to fire safety, health and sanitation.

Pursuant to Section 1771 of the California Labor Code, CONSULTANT and all subcontractors may be required to pay the general prevailing rates of per diem wages, overtime and holiday wages, as determined by the Director of the Department of Industrial Relations, for projects that constitute "public works" projects. The Director's determination of prevailing wage rates is available on-line at www.dir.ca.gov/dlsr/DPreWageDetermination.htm, and is referred to and made a part hereof as though fully set forth herein. California Labor Code Sections 1725.5 and 1771.1 requiring all general contractors and subcontractors to be registered with DIR. Registration can be accomplished through the DIR website by using this link: http://www.dir.ca.gov/Public- Works/PublicWorks.html. Contractor shall pay prevailing wages for any Services performed that are subject to such requirements.

CONSULTANT represents and warrants that CONSULTANT possesses all licenses, permits, and qualifications legally required for the performance of the Work. CONSULTANT shall, at CONSULTANT's sole cost and expense, maintain all such licenses, permits and qualifications in full force and effect throughout the term of this Agreement.

12. Indemnification, Hold Harmless and Defense:

To the fullest extent permitted by law, CONSULTANT shall indemnify, hold harmless and defend MHCSD, its directors, officers, employees, agents and authorized volunteers, and each of them, from and against any and all claims, demands, causes of action, damages, penalties, judgments, awards, decrees, costs, expenses, attorneys' fees, losses or liabilities, in law or in equity, of every kind or nature, including but not limited to personal injury, bodily injury, wrongful death, and property damage including any damage to MHCSD's property, arising out of CONSULTANT's alleged negligence, or wrongful acts related to or in connection with CONSULTANT'S performance of duties under the terms and conditions of this Agreement.

To the fullest extent permitted by law, MHCSD shall indemnify, hold harmless and defend the CONSULTANT, its directors, officers, employees, agents and each of them (collectively referred to as "CONSULTANT Indemnified Parties") from and against any and all claims,

demands, causes of action, damages, penalties, judgments, awards, decrees, costs, expenses, attorneys' fees, losses or liabilities, in law or in equity, of every kind or nature, including but not limited to personal injury, bodily injury, wrongful death, and property damage including any damage to the CONSULTANT's property, arising out of MHCSD's alleged negligence, or wrongful acts related to or in connection with MHCSD's performance of duties under the terms and conditions of this Agreement.

13. Insurance:

Before beginning any work under this Agreement, Consultant, at its own cost and expense, unless otherwise specified below, shall procure the types and amounts of insurance described in Exhibit B, incorporated herein, against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Consultant and its agents, representatives, employees, and subcontractors. Consistent with the following provisions, Consultant shall provide proof satisfactory to MHCSD of such insurance that meets the requirements of Exhibit B and under forms of insurance satisfactory in all respects, and that such insurance is in effect prior to beginning work to MHCSD. Consultant shall maintain the insurance policies required by Exhibit B throughout the term of this Agreement. The cost of such insurance shall be included in the Consultant's proposal. Consultant shall not allow any subcontractor to commence work on any subcontract until Consultant has obtained all insurance required by Exhibit B for the subcontractor(s) and provided evidence that such insurance is in effect to MHCSD. Verification of the required insurance shall be submitted and made part of this Agreement prior to execution.

14. Discrimination:

CONSULTANT shall not discriminate in the provision of service or in the employment of persons engaged in the performance of this Agreement on account of race, color, national origin, ancestry, religion, gender, marital status, sexual orientation, age, physical or mental disability in violation of any applicable local, state or federal laws or regulations.

15. Notices:

Any notice required to be given pursuant to the terms and provisions hereof shall be in writing and shall be effected by personal delivery or by first class mail, registered or certified, postage prepaid, return receipt requested. Unless otherwise designated by either party in writing, such notices shall be mailed as shown on the first page of this Agreement.

16. Termination:

If the CONSULTANT breaches or habitually neglects the CONSULTANT's duties under this Agreement without curing such breach or neglect upon fifteen (15) working days written notice, the MHCSD may, by written notice, immediately terminate this Agreement without prejudice to any other remedy to which MHCSD may be entitled, either at law, in equity, or under this Agreement. In addition, either party may terminate this Agreement upon sixty (60) days written notice to other party.

17. Conflict of Interest Statement:

CONSULTANT covenants that CONSULTANT, its officers or employees or their immediate family, presently has no interest, including, but not limited to, other projects or independent contracts, and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. CONSULTANT further covenants that in the performance of this Agreement no person having any such interest shall be employed or retained by CONSULTANT under this Agreement. CONSULTANT shall not hire MHCSD's employees to perform any portion of the work or services provided for herein including secretarial, clerical and similar incidental services except upon the written approval of MHCSD. Performance of services under this Agreement by associates or employees of CONSULTANT shall not relieve CONSULTANT from any responsibility under this Agreement.

18. Drug Free Workplace:

CONSULTANT shall comply with the provisions of Government Code Section 8350 et seq., otherwise known as the Drug-Free Workplace Act.

19. Force Majeure

It is agreed that neither party shall be responsible for delays in delivery or acceptance of delivery or failure to perform when such delay or failure is attributable to Acts of God, war, strikes, riots, lockouts, accidents, rules or regulations of any governmental agencies or other matters or conditions beyond the control of either the seller/contractor or the purchaser.

20. Form Law:

The Laws of the State of California shall govern this Agreement. Venue is San Joaquin County. The provision of this paragraph shall survive expiration or other termination of this Agreement regardless of the cause of such termination.

21. Documents:

All drawings, specifications, documents and other memoranda or writings relating to the work and services hereunder, shall remain or become the property of the MHCSD whether executed by or for the CONSULTANT for MHCSD, or otherwise by or for the CONSULTANT, or by or for a subcontractor operating under the CONSULTANT'S supervision, or direction, and all such documents and copies thereof shall be returned or transmitted to MHCSD forthwith upon termination or completion of the work under this Agreement.

22. Attorneys' Fees:

If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provisions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which such party may be entitled.

23. Waiver:

No waiver of any breach of any covenant or provision of this Agreement shall be deemed a waiver of any other covenant or provision hereof, and no waiver shall be valid unless in writing and executed by the waiving party. An extension of time for performance of any obligation or act shall not be deemed an extension of the time for performance of any other obligation or act, and no extension shall be valid unless in writing and executed by the waiving party.

24. No Third Party Beneficiaries:

Nothing contained in this Agreement is intended to or shall be deemed to confer upon any person, other than the parties, any rights or remedies hereunder.

25. Headings:

The headings of the sections and exhibits of this Agreement are inserted for convenience only. They do not constitute part of this Agreement and are not to be used in its construction.

26. Non-Liability of Officials, Employees and Agents:

No officer, official, employee or agent of District shall be personally liable to CONSULTANT in the event of any default or breach by District or for any amount which may become due to CONSULTANT pursuant to this Agreement.

27. Entire Agreement and Modification:

This Agreement supersedes all previous Agreements either oral or in writing and constitutes the entire understanding of the parties hereto. No changes, amendments or alterations shall be effective unless in writing and signed by both parties.

Signatures to follow on the next page

IN WITNESS WHEREOF, MHCSD and CONSULTANT have executed this Agreement on the day and year first written above.

TRC Engineers, Inc.

By: DocuSigned by: 60C13B60CFD84B0...
Consultant
Lincoln Leaman

Mountain House Community Services District,
a political subdivision of the State of California

By: DocuSigned by: Steve Pinkerton 4DAD8C075F124D8...
Steven J. Pinkerton
General Manager

Date: 6/10/2021

Approved as to Form:

By: DocuSigned by: 4D33BDE7E6D8453...
John Bakker
General Counsel

Exhibit A: Statement of Qualifications and Billing Rates
Exhibit B: Insurance Requirements

EXHIBIT A
STATEMENT OF QUALIFICATIONS AND BILLING RATES

[Insert]

The MHCSD General Manager is authorized to negotiate annual increases to the billing rates in an amount not to exceed three percent (3%) of the billing rates stated herein.

Statement of Qualifications

Mountain House Community Service District

ON-CALL PROFESSIONAL SERVICES
CONSTRUCTION MANAGEMENT & INSPECTIONS SERVICES

TRC

May 13, 2021

TABLE OF CONTENTS

COVER LETTER

TRC

183 D'Arcy Pkwy.
Lathrop, CA 95207

T 209.858.5500
TRCcompanies.com

A. COVER LETTER

May 13, 2021

Anush Nejad, Community Development Director
Mountain House Community Services District
251 E. Main Street
Mountain House, CA 95391

RE: Statement of Qualifications to Provide Professional Services for Construction Management & Inspection Services

Dear Mr. Nejad,

TRC Engineers, Inc., (TRC) appreciates the opportunity to submit our **Statement of Qualifications to provide Construction Management and Inspection Services for the 2021/2022 fiscal year**. As a leading provider of master planned development inspection services throughout the region, we understand the value a properly managed development project provides to the Mountain House Community. With 6,300 residential parcels and associated infrastructure consisting of roads, utilities, parks, and open space areas, the Mountain House Community Services District (MHCSD) needs a consultant who understands the projects and the process from each stakeholder's perspective to ensure that the final product meets the quality standards of MHCSD, are within the limits of the many permits and conditions of approval, and are completed on time and within budget.

To provide that level of service, the consultant must have the construction knowledge of a contractor, the scheduling and coordination skills of a developer, the understanding of engineering design principles used to develop the plans, and the ability to merge those skills in a way that yields a final product that meets the quality requirements and needs of the MHCSD. As such, the MHCSD consultant team must be led by a person that has direct experience in the planning, construction, inspection, and management of a large master-planned community. TRC does just that.

TRC provides a team that is highly skilled and experienced in the critical elements of the anticipated projects. Our staff is comprised of a unique blend of construction management professionals that have experience as project managers, public works inspectors, material testers, construction foremen and superintendents, master planned development managers, as well as office and resident engineers. We will take a value-added approach to our work to identify and implement opportunities to expedite project delivery and identify cost savings whenever possible.

TRC Engineers, Inc.– Your Value-Added Consultant

TRC is a leader in providing development construction management and inspection services and remains the consultant of choice for our clients, some of whom we have been providing services for nearly a decade. Our portfolio includes: City of Lathrop, City of Lincoln, and Placer County Community Development Resource Agency.

Our proposed Principal-in-Charge and Contract/Project Manager, Lincoln Leaman, PE, QSD/P, brings 30 years of experience providing construction management services for various development projects throughout Northern California. His previous experience includes managing the construction of infrastructure for over 12,000 residential units, over a thousand acres of commercial/industrial development, hundreds of acres of parks, and nearly $800M

in public works projects. Mr. Leaman will be responsible for maintaining TRC's corporate commitment to quality services and continuity of project staff. He has a history of success based on developing a safe and productive work environment that have included measurable milestones and has demonstrated expertise in identifying and maximizing the critical elements of projects. Lincoln and his team will utilize their expertise to maintain a high level of service to the Town of Mountain House.

Specialty Subconsultants

To provide the highest level of service, our team includes the following specialty subconsultants selected specifically for their expertise and familiarity with MHCSD's anticipated projects:

- BrightView Landscape
- Twining
- Fehr & Peers
- Ensberg Engineering
- Comstock Johnson Architects

Conflict of Interest Statement

TRC and our proposed subconsultants acknowledge that are not nor will not work directly for the developers in Mountain House during this contract. Furthermore the subconsultants shall disclose any existing professional services with the developers prior to acceptance of any services.

Contact Information

During the consultant selection process Lincoln Leaman, PE, QSD/P, will be our point of contact with MHCSD. Based out of our local Lathrop office, Lincoln may be reached on his mobile phone at (916) 995-6572 or via email at LLeaman@TRCcompanies.com.

TRC is eager to assist Mountain House Community Services District with the successful completion of Construction Management and Inspection Services for 2021/2022 fiscal year, safely, efficiently, and cost effectively. We will bring our well known "personal service" to Mountain House – a proven willingness to exceed project needs and expectations, flexibility to rapidly deploy expert staff, and effective response to changing project demands – from project start-up through close-out.

Respectfully submitted,
TRC Engineers, Inc.

Lincoln Leaman, PE, QSD/P (CA,CO,UT)
Vice President, Regional Manager

ACKNOWLEDGEMENT

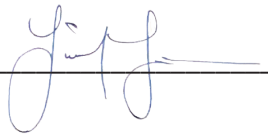
Addendum 1

REQUEST FOR QUALIFICATIONS
PROFESSIONAL CONSULTING SERVICES
For Plan Checking,
Construction Management & Inspection,
and Cost Certification Services

Please sign and date this acknowledgment and include in your SOQ.

FIRM: TRC Engineers, Inc.

DATE: May 13, 2021

SIGNATURE: 

QUALIFICATIONS SECTION

TRC

B. QUALIFICATIONS

COMPANY BACKGROUND

TRC Engineers, Inc. (TRC) is a leading provider of construction management, inspection, and stormwater compliance services to clients throughout California. TRC, is a global consulting, engineering, and construction management firm that provides technology-enabled solutions to the infrastructure, oil and gas, power, and environmental markets. Together, we provide services throughout the project life cycle – the expertise to plan, design, and build the infrastructure for the communities in which we live and work—all under one roof.

TRC will source staffing and manage projects from our local office:

1830 D' Arcy Parkway
Lathrop, CA 95207

Our qualifications for the Mountain House Community Services District (MHCSD) projects are rooted in our team's previous experience with large master-planned development inspection and providing project facilitation services to other agencies. Since 2008, TRC has been at the forefront of providing inspection and project facilitation services, delivering over 7,000 residential lots, including backbone infrastructure, throughout the greater Sacramento and San Joaquin Valley region.

Established: 1969

Years in Business: 52

Organization: Corporation

Number of Employees World-Wide: 5,000+

Number of Employees Northern California: 250+

Number of Offices: 140 (World-Wide)

California Offices: **Lathrop**, Sacramento, Bakersfield, Carlsbad, Concord, Costa Mesa, Diamond Bar, Encinitas, Fresno, Irvine, Lincoln, Los Angeles, Mountain View, Oakland, Orange, Rancho Cordova, Riverside, Rocklin, San Diego, San Francisco, San Ramon

Services:

- Construction Management
- Construction Inspection
- Source Inspection
- Energy Efficiency
- Transaction Advisory Services
- Environmental Permitting, Testing, and Compliance Engineering
- Environmental Engineering and Remediation
- Environmental Health and Safety Management
- Infrastructure Services
- Permitting and Regulatory Filings
- Pipeline and Facilities Services

PROJECT LEADERSHIP

Our team is led by **Lincoln Leaman, PE, QSD/P**, with 30 years of experience in the planning, construction, and management of infrastructure projects totaling over $800M. These projects include bridges, highways, local streets, streetscapes, historical and seismic retrofits, parks, underground utilities, sewer lift stations, plant commissioning and decommissioning, and master-planned development and construction. He has managed the construction of infrastructure elements for over 12,000 residential lots throughout Northern California.

Mr. Leaman's history of success is based on developing a safe and productive work environment that is focused on completing projects on time, within budget, and to the quality standards required by the contract. Mr. Leaman plans his projects such that critical elements of the project are identified, quantified, and scheduled with measurable milestones. Mr. Leaman is also an excellent relationship builder with strong negotiation skills in both public and private arenas. He has led builder groups through the development of infrastructure financing plans, negotiated land acquisition purchases, and managed the construction and financing of thousands of residential units throughout Northern California. Mr. Leaman recently served in this role for the City of Lathrop and the ownership group for the River Islands Development from 2012-2016. During that time, Mr. Leaman provided coordination support to both entities enabling them to advance the development project while minimizing permanent staff growth during the early stages of the project.

DEVELOPMENT SERVICES

Our services for Master Planned Development projects include resident engineering, office engineering, structure representatives, special inspection, material testing, source inspection, construction field inspection and quality assurance, SWPPP inspection and compliance, submittal review, and coordination with utility operators during service testing and connection. Since time is a factor in the cost to the developer and the future revenue to our client, TRC takes a proactive team building approach to these tasks and emphasizes problem solving in our day-to-day activities. This approach provides a collaborative environment that expedites the project, saving the developer money, and bringing revenue to our client sooner, without sacrificing quality.

TRC understands the connection to the entitlement phase and provides verification of compliance with development agreement, conditions of approval, MMRP, and permit conditions. While means and methods are generally left to the contractor's discretion, the MMRP and permit conditions may limit the options available to the contractor for certain tasks. Because our staff has direct construction experience and works collaboratively with the contractor, we can identify these limitations in advance and help develop a work plan that meets the conditions of the permit and provides a productive plan for the contractor. Our staff documents all permit and MMRP work in daily electronic field reports that are cross-referenced with the permit or MMRP item number and related work plan. This provides a real-time status of all MMRP and permit conditions for all project stakeholders.

Our strong public works experience allows us to also provide full-service construction management and inspection for offsite infrastructure projects related to private development, including those financed through a Community Finance District (CFD) or other reimbursement mechanism. These projects often include specialized construction techniques or complicated utility realignment and connections. TRC's staff has extensive experience managing and inspecting the typical mainline utility and roadway tasks, including traffic control, paving, and utility connection. We also have expertise in boring, welding, live utility operation and coordination, SCADA, traffic signals, lime/cement treatment, and CLSM backfill. TRC provides quality control for our clients through daily inspection of the contractor's workmanship and materials provided to construct the proposed infrastructure are in conformance with the contract plans and specifications.

TRC recognizes that funding segregation and auditing is a significant task for our clients. To address this, we provide task specific billing by plan-set or final map within our master agreement. This allows us to isolate

projects with different or segregated funding sources while providing coordinated inspection and project management to ensure that all client and stakeholder needs are met within one contract structure. Our web-based construction management system can track multiple funding or reimbursement accounts down to bid item or cost code detail. This provides our clients with real-time cost tracking and forecasting by funding source as well as standard project-level forecasting.

Our development services includes:

- Constructability and Due Diligence Reviews
- Materials Testing
- Inspection
  - Master Plan, Greenfield, Brownfield, and Infill Development
  - Commercial Development
  - Industrial Development
  - Backbone Infrastructure
  - Underground and Overhead Utility Construction and Relocation
  - Plant Expansions
  - Lift Stations, Pressure Stations, and Tanks
  - SCADA
  - Street Lights and Signals
  - Bridges and Tunnels
  - Jack and Bore/Directional Drilling
  - Landscape and Hardscape
  - Parks and Recreational Facilities
- Warranty Inspections
- Coordination with Utility Operators and Providers
- Joint Inspection with Building Departments
- Public Utility Facility Assessment and Evaluation
- Relocation of Utilities

UNDERSTANDING OF THE RURAL COMMUNITY AND ENVIRONMENTAL CONCERNS

TRC is often asked to provide staffing to remote locations throughout California. Our staff is accustomed to working in remote locations and providing feedback to the client on a regular basis. Our staff is equipped with mobile hot spots to connect to the internet from virtually any job site in the Mountain House Community Service District area. This will provide instant access to MHCSD's staff so that emails, diaries, and photos can be communicated effectively and as-needed. We also understand that development projects in rural areas may have a different focus level than in a more urban setting. Our staff is trained to interact with the public in a courteous and professional manner. Their focus is to identify the issue and either provide direction for resolution or provide the appropriate next contact. Typically, the next contact is a pre-determined agency employee prepared for that phone call or our project facilitator.

SUBCONSULTANT INTRODUCTIONS

Twining's legacy dates back more than 120 years. What started as a family business in 1898 has evolved into one of California's largest service providers of geotechnical, materials testing, and construction inspection services. Highly regarded by state and local agencies, developers, contractors, consultants, and industry for providing high-quality services that are reliable, timely, and compliant, Twining has been a central part of some of California's most regionally significant construction projects. We employ some of the industry's most well-known construction experts who perform research as well as consult with regulatory agencies to shape the future of construction standard practices.

Twining is a full-service engineering and quality control company with unmatched technical expertise. Our services span from QA/QC, materials testing, and inspection, to highly technical capabilities in applied engineering and integrated disciplines. With laboratories throughout California and over 100 inspectors, is unequaled in our core competencies to work on vertical as well as horizontal construction project.

BrightView currently is Mountain House Community Service District's landscape maintenance contractor. BrightView is changing the

way landscape services are delivered. From design to development, maintenance and enhancements, their depth of experience makes them a seamless partner for the entire lifecycle of your landscape. BrightView combines local knowledge with national resources to provide smart solutions that help clients succeed. In 2014, Brickman & ValleyCrest combined to form BrightView, bringing together 140 years of combined experience and client-focused service. BrightView united under the shared belief that taking care of our teams and clients should always be at the heart of what they do. Today, BrightView carries that commitment forward, forging a new era of landscape services. True to their name, BrightView represents optimism for the future—offering new opportunities for clients and team members to succeed. Services offered by BrightView: Landscape Architecture and Planning, Program Management, Design-Build, Project Management, Compliance, Pre-Development, Planting, Hardscape, Sports Field Construction, Pools & Water Features, Tree Growing & Tree Moving, Landscape Maintenance, Snow & Ice Removal, Exterior Maintenance, Specialty Turf & Golf Courses Tree Care.

FEHR PEERS At Fehr & Peers, they are passionate about transforming transportation consulting through innovation and creativity. Fehr & Peers derives inspiration by partnering with communities to understand and shape local transportation, while objectively tailoring services to diverse needs. Clients trust them to help overcome barriers and uncertainty by combining the advanced expertise with curiosity, humility, and initiative to deliver implementable, data-driven solutions that reinforce community values provided by Fehr & Peers. From the most straightforward to the most complex, actively listen to client and community needs and handle every project with diligence and focus. Their clients have appreciated long-term commitments to the communities they serve, trusting Fehr & Peers as their objective partners in transportation since 1985.

ENSBERG ENGINEERING Ensberg Engineering is a solo practice structural engineering firm owned by Luke Ensberg, SE. For several years Luke designed multi-family residential wood framed apartment buildings, reinforced concrete residential buildings, structural steel museum and shopping mall buildings, tenant improvements using cold-formed steel, and a CMU auditorium at a reputable firm in Los Angeles. Since moving to Davis, Luke worked at a structural engineering firm specializing in single and multi-family wood residential design. Ensberg Engineering began in September of 2017, with his work focus on single family residential new homes and remodels, also designing foundations for industrial equipment, and other commercial properties.. Ensberg Engineering has also performed seismic evaluations and retrofits of various other types of buildings including apartment buildings.

Comstock Johnson ARCHITECTS INC. Established in 1982 as a California Corporation, Comstock Johnson Architects, Inc. (CJA) has been in business serving the greater Sacramento Region and surrounding counties for 40 years. CJA has delivered private and public projects for a wide range of commercial and government projects including administrative office facilities, public counter facilities, public meeting facilities, information technology, labs and research facilities. Their 17-person firm includes six licensed architects, a LEED Accredited professional, intern architects including CAD/support staff, and administration staff.

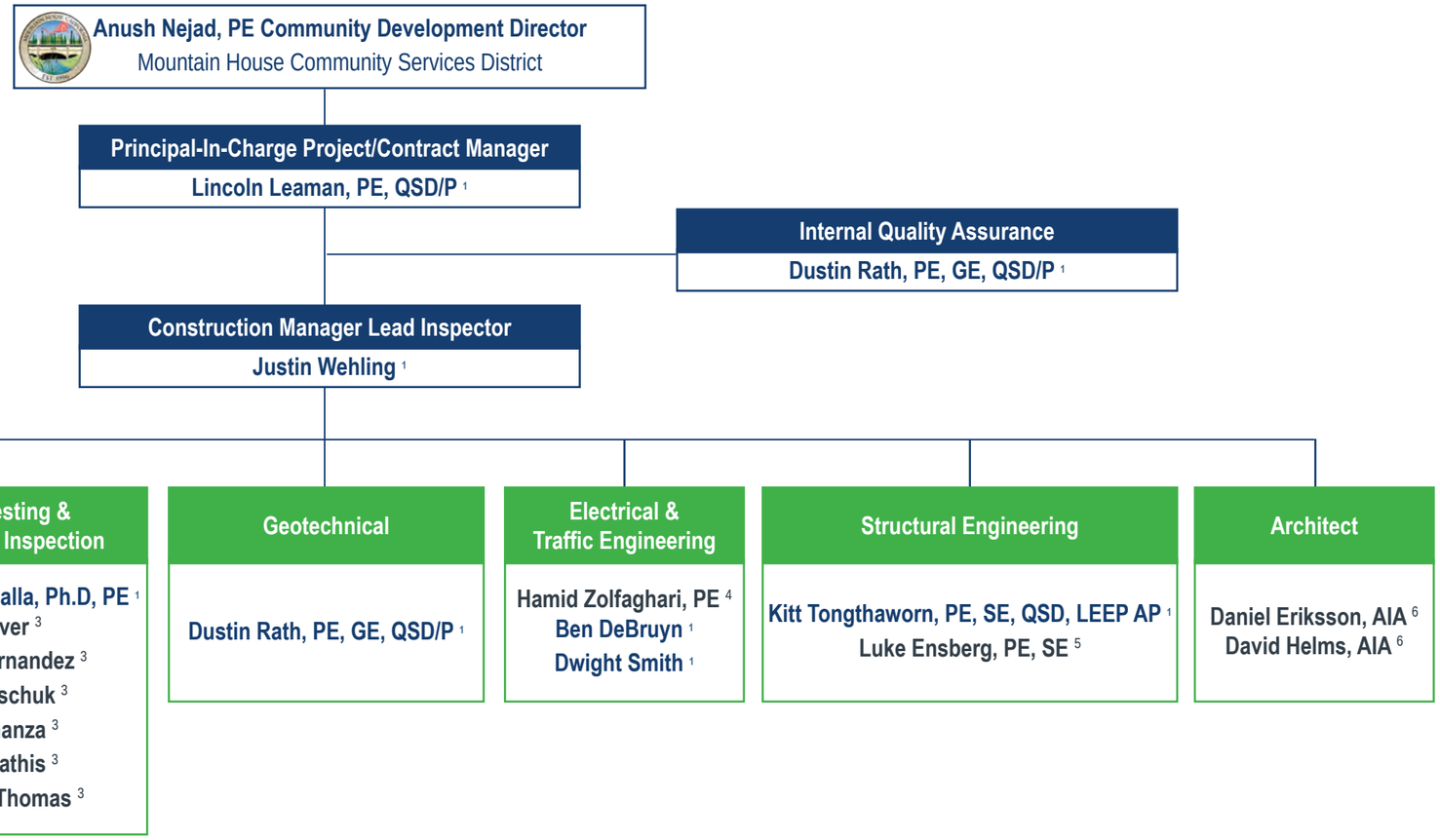
CJA's culture is to provide an exceptionally high level of service to their clients. CJA is a full-service architectural firm. Providing pre-design including master planning and programming through construction phase services. They also provide special studies including accessibility, maintenance, site selection and feasibility analysis.

PROJECT APPROACH, EXPERIENCE, AND AREAS OF EXPERTISE

TRC

C. PROJECT APPROACH, EXPERIENCE, AND AREAS OF EXPERTISE

ORGANIZATION CHART



KEY

1. TRC ENGINEERS, INC.
2. BRIGHTVIEW LANDSCAPE SERVICES
3. TWINING, INC.
4. FEHR AND PEERS
5. ENSBERG ENGINEERING
6. COMSTOCK JOHNSON ARCHITECTS, INC.

EXPERIENCE AND SIMILAR TYPES OF PROJECTS

Our experience is a perfect fit for MHCSD's On-Call Construction Management & Inspection Services contract. Our project team brings in-depth experience working on projects similar in scope and complexity to the anticipated upcoming projects. Our team has expertise on key project elements, including construction of public buildings, parks, trails, streets, utility pipelines, storm drain and sanitary sewer lift stations, water well pump stations, water tanks, drainage basins, wastewater treatment facilities, and encroachment permits.

The projects presented on the following pages demonstrate our experience and professional competence in areas directly related to MHCSD's request for construction management and inspection services.

ON-CALL CONSTRUCTION MANAGEMENT

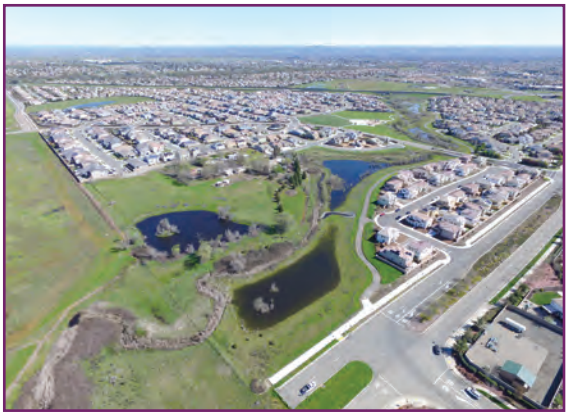
City of Lincoln, CA

Since 2008, TRC has been providing on-call construction support services to the City of Lincoln. Projects have included roads, bridges, full underground and overhead utilities, traffic signals, street lighting, landscaping, irrigation, pipe jacking, cathodic protection, lift stations, force mains, water tanks, and SWPPP monitoring.

Services include resident engineering, assistant resident engineering, office engineering, construction inspection, materials testing and schedule and claims support.

Representative projects include:

Sorrento On-Call Development Services Villages 2-10



Full construction management (project facilitation) and inspection services for the Sorrento Village project, a 472-unit planned development on 156-acres in the City of Lincoln which is adjacent to Lincoln Crossings and the future Village 7 development. It is comprised of 350 single-family detached homes and 36 patio homes. Construction includes mass grading, installation of underground utilities, concrete, paving and the completion of Sorrento Parkway, an existing community arterial. The project also involved sewer, water, storm drain, gas/electric/telecom, overhead relocation, existing gas transmission main, CIPP repair of sewer pipeline, and CIP storm drain. The reconstruction and widening of Sorrento parkway was constructed in two phases. Phase I included widening a standard rural road with two, 12-foot wide lanes to a standard collector street with bike lanes, curbs, sidewalks, and public landscaping; retrofit of an existing creek crossing (bridge) to conform to the new level of service. Phase II involved realignment and reconstruction of the existing intersection between Sorrento Parkway and Moore Road, requiring construction of 2,500 feet of 36-inch-diameter sewer trunk line, relocation of existing overhead utility lines, relocation or installation of new underground utilities, re-grading to revise the street profile, and staged construction to maintain access to local traffic.

Bella Breeze Drive

Bella Breeze Drive was a secondary arterial within the 12 Bridges community. The completion of this project provides backbone infrastructure for 410 residential lots in Villages 1-4, several commercial parcels, as well as a community park. TRC provided construction inspection and project management (project facilitation) services for the City of Lincoln. Construction included mass grading, installation of underground utilities, concrete, paving, and the completion of a new signalized intersection with Joiner Parkway, an existing community arterial. The project was constructed at an accelerated pace and included unique staging that allowed the dry utilities to be installed in advance of the wet utilities. Critical elements of the project were hard rock/Mehrten, environmentally sensitive grasslands and wetlands, adjacent residents, traffic control, and public relations.

12 Bridges Villages 1-4

Villages 1-4 in the 12 Bridges master-planned community are successor projects to the Bella Breeze Drive extension project. These projects will deliver 1,168 new finished single-family lots to production homebuilders at completion. TRC is currently providing construction inspection and project management (facilitation) services for the City of Lincoln to construct infrastructure for 410 of the 1,168 units. Construction includes mass grading, installation of underground utilities, concrete, paving, and public landscaping. Villages 2A, B, and C were constructed at an accelerated pace, with multiple underground crews working simultaneously. Village 1 is being constructed in phases to minimize upfront infrastructure costs and limit the amount of infrastructure built through the wet season. Critical elements of these projects were hard rock/Mehrten, environmentally sensitive grasslands and wetlands, adjacent residents, traffic control, and public relations.

Chambers Drive Sewer/Nicolaus Road SLS Improvements

The $1.5 million Chambers Drive Sewer/Nicolaus Road SLS Improvement Project was part of the Regional Sewer project that was developed by the City of Lincoln to provide increased sewer capacity for the City of Lincoln and surrounding communities. This project completed a north to south sewer trunk line, decommissioned two sewer lift stations, provided a new 2,200-foot-long force main connection, and upgraded an existing sewer lift station with an odor control system. The sewer trunk line included 500 feet of new 30-inch-diameter vitrified clay pipe (VCP) with controlled low-strength material (CLSM) backfill, connected an existing 36-inch-diameter force main to a recently constructed 36-inch-diameter VCP trunk line, and converted the 36-inch-diameter force main to a gravity trunk line. The project brought more than 5,000 feet of sewer trunk line into service, eliminating the need for two pumping stations and miles of force main. Installation methods and special techniques included dewatering; deep shoring and CLSM backfill for the sewer trunk line; construction of

new manholes, pigging; installation of an odor control system; cathodic protection; and restart/commissioning. TRC delivered this project to the City of Lincoln in half the initial contract duration and under budget, ensuring eligibility for full reimbursement funding. The relationships developed between the City, TRC, and the contractor were the key to success on this project. Project Award: 2016 APWA, Sacramento Chapter, Project of the Year.

Phase 1 Reclamation

TRC provided full construction management and inspection for this successor project to the Chambers Drive/Nicolaus Road project, noted above. This project was part of the Regional Sewer project that increased sewer capacity for the City of Lincoln and surrounding communities. This project provided over 5 miles of reclaimed water distribution line, from the Lincoln Regional Waste Water Treatment Plant at the south end of town to the Foskett Regional Park on the north end of town. The distribution line is comprised of newly installed pipeline and re-purposed pipeline previously used as a sewer force main. In order to bring the system together, the existing force main pipeline had to be cleaned (pigged) and sanitized prior to connection to the new pipeline. The project also retrofitted and upgraded the existing pump facilities, which involved improvement from a two-pump system to a five-pump system, addition of a hydropneumatics tank, new check valves, yard piping, electrical control equipment, and an updated SCADA control system. Despite many utility conflicts during pipeline installation, pigging challenges, and several long-lead items, the project was completed in less than the original 150 contract duration, ensuring eligibility for full reimbursement funding. The relationships developed between the City, TRC, and the contractor were the key to success on this project. Project Award: 2016 APWA, Sacramento Chapter, Project of the Year.

Dr. Nathan Dubin Neighborhood Park

TRC provided pre-construction, construction management, inspection and office engineering services for the construction of this new $2.4M, 6.4-acre park. The Nathan Dubin Neighborhood Park is bordered on the west by a nature preserve and paved trail. The park features include:

- Large and small picnic shelters
- Fitness stations
- Dry creek feature
- Drought-tolerant planting area
- Themed sidewalks and pathways with animal sculptures and interpretive signage
- Tot lot play structure
- Adventure play area and structure
- Soccer field
- Full size basketball court
- Wetlands (drainage detention)

In addition to features above, the project includes site grading, storm drain systems, site utilities, site furnishings, site lighting, drought tolerant landscaping and drip irrigation systems, sidewalks and maintenance accessibility, and site electrical.

Chief Robert Jimenez Community Park

TRC provided pre-construction, construction management, inspection and office engineering services for the construction of this new 17-acre, $1.1M park. The park is bordered by Hwy. 65, Ferrari Rancho Road, and Groveland Lane. The first phase of the park included mass grading, a water service off Groveland, irrigation and drought-tolerant landscaping along the Hwy. 65 border, and irrigation mainlines to serve future play fields. Electrical service was provided to a junction box at the middle of the site. Phase 2 of the project provides 4 lighted tennis courts, two regulation basketball courts, restrooms, expanded parking lot, accessible sidewalks, and plaza area landscaping.

12 Bridges Villages 23

Villages 23 of the 12 Bridges master planned community is part of the Catta Verdera gated golf course community. This project delivered 75 finished lots for single family residential construction. TRC provided construction inspection and project management (project facilitation) services for the City of Lincoln during construction of the infrastructure. Construction included mass grading, installation of underground utilities, street lights, concrete, paving and public landscaping. This project was constructed in phases to accelerate the construction of model homes. Critical elements of these projects were hard rock/Mehrten, environmentally sensitive grasslands and wetlands, adjacent residents, traffic control, and public relations.

ON-CALL CONSTRUCTION ADMINISTRATION

City of Lathrop, CA

TRC has provided on-call construction support and staff augmentation services to the City of Lathrop on various contracts. The work has consisted of performing constructability reviews, providing training, and full range construction management services including Resident Engineering and Construction Inspection Support for various transportation and Citywide infrastructure projects. Projects have ranged from new bridges, interchange improvements, signalization, roadway work, sewer line installation, and oversight of private developer site improvements (including wet and dry utilities, roadways, and parks/play fields).

Representative projects include:

River Islands Development

Construction of the $300M River Islands Master-Planned Development Project. TRC provides quality control/quality assurance inspection and project management (project facilitation) services for the City of Lathrop. TRC verifies that the Contractors are using approved materials and methods for the work they are performing and that they are being installed to correct line and grade. This project uses the Procore application for all field documentation and communication activities, including mobile entry of diaries, upload of photos, processing and access to submittals, viewing and redlining plans, punchlist creation and maintenance, email and document storage, and documentation of issues. During Stage 1, 1A, and 1B, TRC also provided selected project management support to the City.

TRC's role was to assist in developing project specific standards and provide some Project Management services to support the City's growing engineering department. The project was initiated as Stage 1 (Stewart Road Extension), a backbone infrastructure project to serve the River Islands Technology School (opened fall 2013). The Stewart Road Extension and Infrastructure project included 2-miles of arterial roadway extension and associated utility installations, including six jack and bore utility extensions under the UPRR, connection to a regional 30-inch-diameter domestic water transmission main, and large-scale site dewatering to install underground utilities.

Subsequently, **Stage 1A** was initiated to provide infrastructure for 498 single-family residential units. Significant construction elements included:

- A sewer lift station with SCADA controls and flushing station
- 15,000 (+/-) feet of new mainline sewer and water
- 100,000 (+/-) feet of local drainage pipeline and inlet structures
- 10,000 (+/-) feet of domestic and reclaimed water distribution
- Storm Drain pump station structure to regulate lake levels for flood control
- 50 Acre regional park
- Neighborhood clubhouse with restaurant
- Lighted archway entrance features
- Construction of 3 roundabouts with theme art structures

ON-CALL CONSTRUCTION ADMINISTRATION

City of Lathrop, CA

- Two plazas for congregation with trellis covers and a lighted archway

Stage 1B followed in included infrastructure for 1,077 single family residential lots, which included:

- 2,500 feet of 30-inch-diameter sewer trunk line
- 30,000 (+/-) feet of new mainline sewer and water
- 20,000 (+/-) feet of local drainage pipeline and inlet structures
- 10,000 (+/-) feet of trunk sewer and storm drain lines
- 20,000 (+/-) feet of domestic and reclaimed water distribution lines
- Over 2 miles of regional arterial roads with 8" gas transmission main through a 500' bridge
- 1.3 miles of overhead transmission line and substation
- Several hundred acres of commercial/retail sites
- Construction of 3 roundabouts
- A 500-acre regional high-tech employment center
- Construction of seven new lakes
- Completion of the storm drain pump station and 48" pressurized outlet

Stage 2A is nearing completion of the installation of wet and dry utilities for 1,043 SFD residential lots, a 100-acre regional park, 2 neighborhood parks, 10 lakeside parks and a school site, as well as 2 ½ miles of 200-year levy construction. The utilities required for this Stage include:

- 30,000 (+/-) feet of new mainline sewer and water
- 20,000 (+/-) feet of local drainage pipeline and inlet structures
- 10,000 (+/-) feet of trunk sewer and storm drain lines
- 20,000 (+/-) feet of domestic and reclaimed water distribution lines
- 10,000 (+/-) feet of lake interconnect pipeline, lake fill line, and lake aeration line
- Construction of 4 roundabouts
- 2 miles of new 200-year certified levee

Stage 2B has recently started the installation of wet and dry utilities for 1,187 SFD residential lots, 2 neighborhood parks, 4 linear parks, 8 lakeside parks, as well as 3 ½ miles of 200-year levy construction. The utilities required for this Stage include:

- 30,000 (+/-) feet of new mainline sewer and water
- 20,000 (+/-) feet of local drainage pipeline and inlet structures
- 10,000 (+/-) feet of trunk sewer and storm drain lines
- 20,000 (+/-) feet of domestic and reclaimed water distribution lines
- 10,000 (+/-) feet of lake interconnect pipeline, lake fill line, and lake aeration line
- 2 miles of new 200-year certified levee

Additional Projects Completed for the City of Lathrop

- Lathrop Rd. Interchange Reconstruction and Signalization
- Louise Ave. Interchange Reconstruction and Signalization
- Bradshaw's Crossing Bridge
- Lathrop Rd. Grade Separation
- Harlan Rd. Realignment

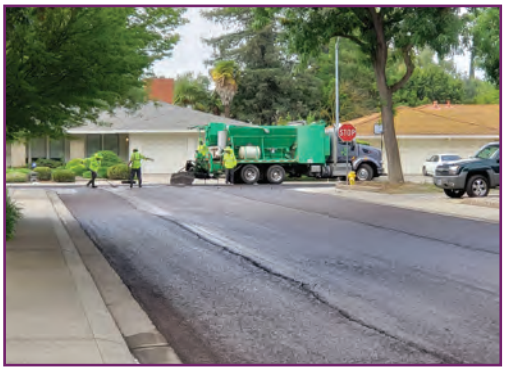
ON-CALL CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES

City of Modesto, CA

TRC has provided on-call construction and inspection services on a variety of projects for the City of Modesto. Scope of work includes roadway resurfacing; grind and overlay; cape seal; double chip; micro surfacing and slurry; concrete work includes the construction of handicap ramps for ADA compliance, driveway approaches, sidewalk, and walking paths; underground improvements include storm drain inlets and pipeline for the Roosevelt Park project. We have also performed constructability reviews for several street rehabilitation projects and a water well pump station.

Representative projects include:

Standiford Avenue Pavement Rehabilitation: Approximately 3-miles of pavement rehabilitation from Dale Rd. to Sherwood Ave. approximately 3-miles. Project includes roadway resurfacing/reconstruction, new signage and striping, handicap ramps for ADA compliance upgrade, storm drainage system improvements, and signal upgrades.



Lakewood Neighborhood Street Improvements: Pavement rehabilitation of deteriorated pavement with an asphalt rubber cape seal within the Lakewood Neighborhood (area bordering Scenic Dr., Eastridge Dr., Laramie Dr. and Lillian Dr.). This project also included the removal and replacement of 89 handicap ramps for ADA compliance upgrade, storm drainage system improvements, and safety improvements around Lakewood Elementary School.

Village 1 Slurry Seal: Pavement rehabilitation of deteriorated neighborhood streets with a slurry seal. Streets included in the project are bordered by:

- Sylvan, Oakdale Rd. and Claus on the north side of Floyd Ave.
- Roselle, Merle and Claus on the south side of Floyd Ave.
- Floyd Ave. from Roselle to Fine

This project also included replacement of handicap ramps for ADA compliance throughout these neighborhoods.

Wylie, Floyd, Carver Street Improvements: Pavement rehabilitation of deteriorated pavement with an asphalt rubber chip seal, cape seal, and type II slurry seal within the following areas:

- Floyd Ave. from Oakdale Rd. to Mc Henry Ave.
- Wylie Dr. from Oakdale Rd. to Brighton Ave.
- Carver Rd. from Pelandale Ave. to 9th St.

This project also included the replacement of 37 handicap ramps for ADA compliance, storm drainage system rehabilitation, and safety improvements around Rose Elementary and Somerset Middle Schools.

CONSTRUCTION INSPECTION AND PROJECT FACILITATION SERVICES – PLACER COUNTY COMMUNITY DEVELOPMENT RESOURCE AGENCY

County of Placer, CA

Placer Vineyards Master Planned Development– Placer County, CA

The Placer Vineyards Specific Plan provides more than 14,000 homes and 165 acres of commercial development, as well as 6,000 acres of agricultural land and open space. The project is located along the western urban border of the City of Roseville and near the northern suburban border of the Antelope area in Sacramento County. TRC has been selected to provide construction management and inspection services on several projects within this master planned community.

Property 1A

Property 1A is a 400-acre project on the north east corner of the specific plan, near the corner of Walerga and Baseline Roads. The project is approved as an active adult community with 1,117 low-density residential units on 247 acres and a 168-unit high-density project on 9.8 acres. The remaining 243 acres are planned as open space areas, parks and recreational areas. TRC is currently providing construction management and inspection of the infrastructure required for the construction of Village 1A (184 residential finished lots) and Village 1B (140 residential finished lots). In addition to the village infrastructure, the project is responsible for the installation/extension of underground utilities and roadway re-construction on Walerga Road; construction of the 9th street emergency vehicle access; construction of Town Center Avenue; and installation of new traffic signals at its intersection with Walerga Road.

Baseline Road Widening and Reconstruction

Baseline Road runs east-west on the north side of the Placer Vineyards Specific Plan and connects Walerga Road on the east to Newton Street on the west. Improvements include the installation of nearly 20,000 LF of 42-inch water transmission pipe and widening of approximately 12,550 linear feet of roadway. This new section of 4 lane arterial roadway includes new traffic signals at the intersections with Trade Center Road, Wild Poppy Road, and Palladay Road. TRC is providing construction management and inspection of the grading, underground utilities, widening work, traffic signals, pavement restoration, streetlights, signs, striping, landscaping, and erosion control.

Palladay Road Widening and Reconstruction

This project generally includes widening of approximately 2,600 feet of Palladay Road, including striping, signage, a new traffic signal, and a new roundabout; installation of approximately 5,400 LF of 16-inch water main (transmission) and associated appurtenances; installation of approximately 2,100 LF of 16-inch recycled water line and associated appurtenances; and installation of approximately 950 LF of 10-inch sanitary sewer line and associated structures, as well as a maintenance road. TRC is providing construction management and inspection of the grading, underground utilities, widening work, traffic signals, pavement restoration, streetlights, signs, striping, landscaping, and erosion control.

APPROACH TO THE PROJECT AND PROJECT MANAGEMENT

TRC's approach to our construction management and inspection services provides a comprehensive road map for efficient management of construction activities. Our approach is designed to deliver MHCSD's projects in accordance with all contract requirements - meeting all the project goals for MHCSD and the developer. We will manage the project, inspect the work and administer the contracts in compliance with the contract documents for each project assigned, typically including approved project plans, MHCSD procedures and standards, applicable regulatory and utility requirements and Caltrans Standards (if applicable). Our approach is designed to deliver the projects safely, cost effectively, and on time.

PROJECT MANAGEMENT, INSPECTION GOALS, AND PROCEDURES

TRC's comprehensive approach to project management focuses on strong quality assurance, effective document control, efficient dissemination of project information, and on-time completion. Our staff takes a proactive approach to each project, constantly working to identify "pinch points" and develop resolutions to minimize project impacts. **Our job isn't simply to look for substandard work product. Our goal is to avoid re-work.** We strive to make sure that the contractor has the correct information prior to start of each operation and we have the correct staffing levels, so they can work safely, efficiently and avoid re-work. This approach has proven to be the most effective way to minimize change orders, expedite project schedules, and provide a positive working environment for all stakeholders.

TRC will develop a staffing plan to provide MHCSD a framework for delivery of construction management services as well as provide a communication and operational plan for field personnel. The goal is to provide a staffing structure that will allow MHCSD to:

- Regulate staffing levels and associated costs according to need
- Maintain reliable communication between the MHCSD, developer, contractor, other stakeholders, regulatory agencies, and the public
- Maintain consistent standards and inspection protocols to ensure each phase of a project is built to properly integrate with adjacent facilities and projects
- Provide a "funneling" of project information that results in a single comprehensive information flow to and from MHCSD

Our five-step approach to building a project management plan is designed to meet these goals.

1. Developing and Managing the Staffing Plan

TRC's approach to project facilitation and inspection services is designed to be responsive to the project needs. We understand that staffing levels for projects will vary constantly. To develop a Staffing Plan for construction projects, we will break the project down according to the development phasing plan. Then, we segregate project elements within each phase by whether they were standard residential development infrastructure or, specialized facilities like storage tanks and pump stations. Then we will look at projected construction start dates for each classification and phase.

Based on our experience with these types of work, there are some general guidelines and indicators for staffing levels. We will apply that historical knowledge to your project based on the number of finished lots, and factoring for the number of underground crews, amount of specialty facilities (lift stations, tanks, deep transmission lines), scope of off-site work and staging of the project.

Our contract manager and project facilitator, Lincoln Leaman, PE, will serve as TRC's single point of contact to MHCSD's project manager for all staff level planning. This approach will minimize confusion and ensure expedient support to MHCSD and the developer.
To effectively manage our contracts, TRC's internal management team meets weekly to discuss the needs and status of each of our projects and our staff. At

these meetings, we identify which TRC staff will soon be up for reassignment and which clients will need additional support. We then match an individual's skills and experience with our client's needs. Our record in this regard is excellent, TRC has never failed to supply qualified personnel on any of our on-call contracts. Through regular communication with MHCSD and project stakeholders, TRC will meet the varying demands of the project.

Mr. Leaman has directly managed each of our team members on prior infrastructure projects. They enjoy an excellent working relationship, and all have a history of successfully completing projects. Their strong relationship will allow the team to share workload, maximize efficiency, and reduce inspection costs at the front end of the project. The pace of infrastructure construction will be dictated by market demand and our staffing plan will provide flexibility to react to increases and decreases in construction activity.

2. Resource Allocation and Cost Reporting

In developing a schedule and resource allocation, start dates and durations will be estimated and provided to show possible relationships between projects and the effects of overlapping projects. As more definitive information becomes available, this tool will provide an accurate representation of the resource needs on a per project basis and allow MHCSD and TRC, collaborating with the developer representative, to evaluate and select staffing in a timely manner. It also provides an opportunity to do "what if" analysis to determine the cost benefit of accelerating projects and the impacts that has on staffing resources.

Most importantly, we are able to efficiently document rework and segregate associated inspection time as a sub-phase. This allows MHCSD, the developer, and contractor to see and understand the cost impacts of rework.

3. Management of the Project

TRC has developed a successful construction management and inspection work plan for public works and private development projects that is broken down by the three primary stages of a project; pre-construction, construction, post-construction. Below is a brief scope of work for each Stage.

I. Pre-construction Documentation of Pre-construction Conditions

TRC's inspectors will walk the site and utility alignments to identify construction issues. The project site conditions, surrounding areas, and access points not addressed on the plans will be documented before construction starts to avoid disputes about damage caused during construction or restoration of the site post-construction. Our documentation includes relevant project photographs and videos with notes as applicable. All photos will be logged with a date, description, and location which is accessible throughout the project on Procore.

Pre-construction Meeting

TRC will conduct a pre-construction meeting, which the contractor, MHCSD staff, permitting agencies, TRC project staff, and other pertinent entities, will be invited to attend. During the meeting, we will discuss project specifics, including contract submittal requirements, change order and potential claim procedures, the contractor's construction schedule, technical issues, and safety procedures. TRC will prepare a meeting agenda and will provide minutes to the attendees for their records. All necessary forms will be provided to the contractor for submittal in accordance with required construction records and accounting formats.

II. Construction

Safety

Safety is paramount on construction sites. Given that construction work entails a broad spectrum of activities, many of which are inherently dangerous, creating an incident-free construction site requires more than just complying with the myriad regulations that govern construction activities - it demands a "culture of safety" embraced by all levels of an organization. At TRC, every person working on a project practices accident prevention. Our personnel approach their work with

a "safety first" attitude and under go rigorous safety training, including 10-hour Cal/OSHA, Confined Spaces, and Fall Protection. We take a proactive role in job site safety by participating in the contractor's safety meetings and promoting the concept of Safe Production, which is based on daily pre-task planning that identifies the proper way to complete a task. Defining work in this way allows construction crews to utilize a work plan that integrates production goals and safe practices. This eliminates the conflict of choosing production over safety and provides a simple, measurable performance metric for safety. This method has produced unprecedented safety results and drastically reduced injuries, incidents, and accidents for construction crews.

Contract Administration and Project Documentation

TRC will use Procore's system for contract administration and document processing on this project. Procore is a cloudbased construction management and document control system used to log and track all project documentation, including contract status, applications for payment, PCO's, CCO's, RFI's, submittals, inspector daily reports, progress photos, schedule information, project correspondence, and labor compliance. This innovative approach to project management and documentation provides an interactive environment for all project stakeholders to participate at the desired or required level.

The program will be tailored to follow MHCSD's filing system to aid in document retrieval and delivery of project files at the end of the project. For projects with federal funds or Caltrans oversight, we will set up the standard Caltrans filing format in Procore. TRC recommends holding a meeting at the beginning of the project to confirm document control protocol. This process will allow specific needs to be identified before the files are set up and to minimize questions at the end of the project.

Procore provides a seamless electronic path for the field staff to interact with the resident engineer, office engineer, MHCSD, the designer, and the contractor in a secure manner, right from the project site. This means inspectors and the contractors can meet in the field to review any issues and create and submit RFIs with annotated plan sheets. RFIs can be commented on or forwarded to any project participant for resolution. Once resolved, the resident engineer or MHCSD can convert an RFI into a confirmed PCO that the inspector then tracks on his/her daily report. Once the work is complete, the PCO can be converted to a CCO, with all the background information and field tracking attached. In some cases, the duration between the first field meeting and executed CCO with specifications can be as short as an hour or two. At the end of the project, MHCSD will have a complete electronic (and paper, as required for state or federally funded projects) file that is organized in the requisite file folder categories.

TRC will prepare and submit monthly reports to MHCSD and in both electronic and printed formats. These reports will document cost and schedule items for the project to date and for the most recent month. Reporting will include current and previous payments made to the contractor; project completion milestones and any impacts to those dates; change orders processed during the current month and a cumulative total for all change orders processed to date; a narrative on schedule issues, and work completed during the current month as well as anticipated activities for the upcoming month. The report will also include information on submittals and RFIs submitted during the subject period and cumulative to date for the project. Several project photographs will be included in each report of work activities completed during the reporting period.

Construction Meetings

TRC will hold weekly progress meetings to coordinate communication with the contractor, MHCSD, developer, and other stakeholders, as necessary. Our staff will proactively meet with the contractor to discuss upcoming operations, contract requirements, and potential issues related to proposed construction activities. Separate field meetings with other stakeholders to discuss their concerns may be necessary to keep a project moving forward. Before the contractor demobilizes a project, we will invite all stakeholders to walk the project with us to make sure their concerns have been addressed.

Constant communication with all parties will lead to the successful, on-time completion of the projects.

On-Site Inspections

As the construction manager for MHCSD's projects, TRC's role is twofold – (1) to verify that construction proceeds in accordance with the plans, specifications, permits, conditions, and all other pertinent project standards and (2) to conduct inspections to verify the workmanship and quality of all work conducted on site. Any deficiencies or deviations from the contract documents will be addressed with the Contractor in the field first. If there is no resolution within 24 hours, the inspector will forward the issue to the Project Facilitator for resolution. TRC's inspectors are responsible for:

- Monitoring the contractor's work for general conformance with the plans and specifications
- Documenting the progress of the work with daily diaries and photographs, available through Procore instantly
- Monitoring contract change orders work in the field
- Confirming that the engineer's submittal comments are incorporated into the work
- Reviewing the contractor's as-built record drawings status
- Coordinating materials testing
- Reviewing and logging materials testing results and addressing non-conforming tests
- Preparing deficiency and punch lists

Permits

Our staff will develop a log of permit conditions that includes regulatory milestones and reporting requirements correlates those requirements to pay items and tasks on the schedule, and shows current status relative to permit conditions. All activities that directly relate to permit activity or are governed by a permit will be tracked in our inspector's daily reports with digital tagging back to the permit. Using Procore, those activities and inspector reports will be available in real-time and sortable by permit type/name, date, and responsible contractor. Upon completing regulated activities, our resident engineer will submit the required permit closure documents to the issuing agency.

Submittals

TRC will process all required submittals through Procore, creating a real-time record of action on each submittal. The submittal log will be available to all stakeholders through the web portal and distributed at each weekly meeting. Each submittal will be assigned due dates for each required reviewer, and reminders will be sent out automatically. We will coordinate the review of the submittals with MHCSD, designer, and developer so the correct person reviews and receives a response on each submittal. Prior to forwarding submittals, we will review each submittal for completeness. If a submittal is found to be incomplete, it will be immediately returned to the contractor with the deficiencies noted.

Cost Control and Reporting

A monthly status report will be generated for MHCSD and the developer to provide an update on the project schedule, project budget, expenditures on change orders and any appropriate analysis, a forecast at completion (costs), work completed in the specified period, work contemplated for the next period, outstanding project issues, any potential claims and analysis of those claims, project photographs, and TRC contract status. This report will also summarize the anticipated cash flow of the remaining work, including all hard costs such as change orders, item overruns, and soft costs such as potential claims.

TRC also utilizes a system for tracking and monitoring the actual construction costs on a project. This system utilizes reporting features from Procore and custom spreadsheets to track progress pay estimates, item over-runs and underruns, and contract change orders. These forms are in electronic format and can be tailored to meet the Client's needs.

Progress Payments

Procore contains a progress pay estimate component for tracking and monitoring actual construction costs. The contractor will forward their monthly payment request to our resident engineer for review. Whether the construction budget is an independent schedule of values or a cost-loaded CPM schedule, the resident

engineer, with input from the field inspector, will compare every payment item to the actual work performed during the month. We will recommend to MHCSD any necessary withholdings, such as liquidated damages, labor compliance issues, stop notices, rejected work, or noncompliance with contract requirements. This integrated system ensures that pay records meet audit standards on the first review and provide MHCSD real-time access to the records.

Management of Change Orders and Potential Claims

Constructability reviews and a partnering relationship with the contractor are critical to minimizing contract change orders and claims. TRC will review the plans and specifications to verify the design as presented is complete and clear, poses no construction conflicts, and is economically feasible to build. When we discover potential issues, we work with our clients and the contractor to develop creative solutions.

Our project facilitator will use the change order authorization process established with MHCSD at the beginning of the contract and will complete an entitlement assessment for contract change orders, analyze costs and schedule impacts, recommend approval or rejection and negotiate the approved change with the contractor. Change order authorizations are tracked in monthly reports to monitor overall construction budget authorizations and contingency balances. Potential costs will be tracked for budgeting purposes until resolution.

III. Post-Construction

Project Close-Out

Elements leading to project completion include rectifying outstanding punch list items, approval and acceptance of final payment, and completion of project paperwork. TRC's tasks will include:

- Working with the contractor to verify the as-built drawings are kept up to date on a regular basis
- Making sure our as-built set of drawings reflect the same changes
- Developing a punch list of remaining items of work after the contractor's work is substantially completed and following through with the contractor's completion of those items
- Conducting a final project review with MHCSD, the designer, and other agencies that may be affected by the work
- Upon satisfactory completion, submittal of a formal recommendation for project acceptance
- Preparation of the proposed final payment, addressing the contractor's exceptions, and submittal of the final payment requests in the time-frame required by law.

Final Project Documentation

A final submittal package of all field records will be submitted to MHCSD in an organized, timely manner. Along with the records, we will prepare a project completion report, which will include:

- A summary of change orders and potential claims
- A summary of the materials tested and incorporated into the work
- Final project schedule and project expenditures
- Summary of final acceptance
- As-built drawings
- Paperwork for federal compliance and labor compliance; preparation of reimbursement invoices; and all required paperwork, reports, and submittals, as necessary.

4. Implementing The Five C's of a Successful Project

Beyond developing a staffing and construction management structure, the Justin Wehling your construction manager lead inspector will follow the "Five C's" principle as a guide to the management of these proposed projects. These five principles provide a culture that is conducive to cooperation and collaboration, delineation of responsibility, and accountability. These guiding principles are:

- Constructability
- Continuity
- Communication
- Consistency
- Cost Control

Constructability

Prior to projects being started, the Justin Wehling (Construction Manager Lead Inspector) will work with the plan review staff, designer, natural resource consultants, and developer representative to identify constructability issues, permit conditions that affect means and methods options, and stormwater discharge risk factors and look for the most efficient ways to construct and manage the project. The facilitator will look at staging/phasing, construction materials, means and methods options, the status of utility agreements, and market pricing to help guide the plan development and review team towards the most economical way to construct the project in conformance with project specifications and permit conditions. Justin will continue to support this group throughout the project, ensuring that plan review cycles are efficient, learned lessons are incorporated into the review process and final plans have the appropriate level of detail, notes and references. This practice has proven to make a significant improvement in cost savings and schedule performance of a project. Typically, this component of the process will identify conflicting or confusing plan details, erroneous or missing call outs, dimensional errors and/or missing existing utility information within the plan set.

Similarly, it can also pinpoint missing or unclear measurement and payment definitions, inconsistent or unenforceable schedule requirements, and hours of work and material availability in the contract documents. Once completed, this review will produce a set of plans that:

- Properly integrates with the built and future environment
- Produces reliable and predictable cost, quality and schedule

Continuity

MHCSD initially establishes continuity for the project through the plan check process and application of consistent standards. Each project is managed through a repeatable and proven process and should provide consistent results in terms of safety, quality, schedule and reporting. There is always an opportunity for changes due to constructability issues, market forces, regulatory change, or developer choice.

Since a large development project could have multiple plan sets or projects underway with a variety of complexity and interagency coordination, the project facilitator with need to be the bridge between the developer, contractor, inspectors, plan review, and environmental staff when changes occur. In order to manage these changes, project manager will manage the project and information flow using a Hub and Spoke Approach (Figure 1 page 23). This allows the project manager to help set priorities and provide feedback to the various project stakeholders based on construction schedule, plan check status, safety concerns, quality, cost, environmental risk, and market driven pressures.

Personal connection is important also. Our project manager, Lincoln Leaman will hold weekly, all hands project status meetings that review the status of:

- “Hot List” – short list of the most pressing issues
- Construction status/schedules (full project and 2-week look-aheads)
- Material testing/compaction
- Inspection and specialty consultant resource allocation and overtime requests
- Safety
- Traffic control
- Submittal status
- RFI’s
- CCO/PCO
- MMRP status and issues
- SWPPP status and issues
- Plan revisions/spec updates
- Permit status/compliance
- Labor compliance
- Status of any deposits, shared financing, reimbursement, or shared services agreements
- Utility agreement status and construction start dates
- Features requiring special care – railroad or any cultural resource sites

These meetings will be open to all stakeholders and key construction field staff. The focus of the meetings will be to share information with fellow stakeholders in a way that progresses the project in an efficient that does not compromise safety or quality. We will achieve this by building trust through mutual accountability and focus

on a common goal. The agenda and minutes for the meetings will document attendance, assign responsibility and due dates for open items, document action taken and/or discussion on each item. The minutes will be delivered automatically to all attendees and be available through the Procore application.

The project facilitator will also hold weekly inspection staff meetings to review projected workload, verify proper alignment of staff expertise to active construction items and operations. All inspectors, material testers, and specialty consultants will participate in this meeting. These meetings will also be an opportunity for the project facilitator to build the culture for the team. This culture will be based on mutual respect for all team members, a pro-active approach to the work, and a desire to be part making the project successful for MHCSD and the developer. These will be solution-based meetings focused on finding opportunities to apply solutions prior to the impact of a potential problem.

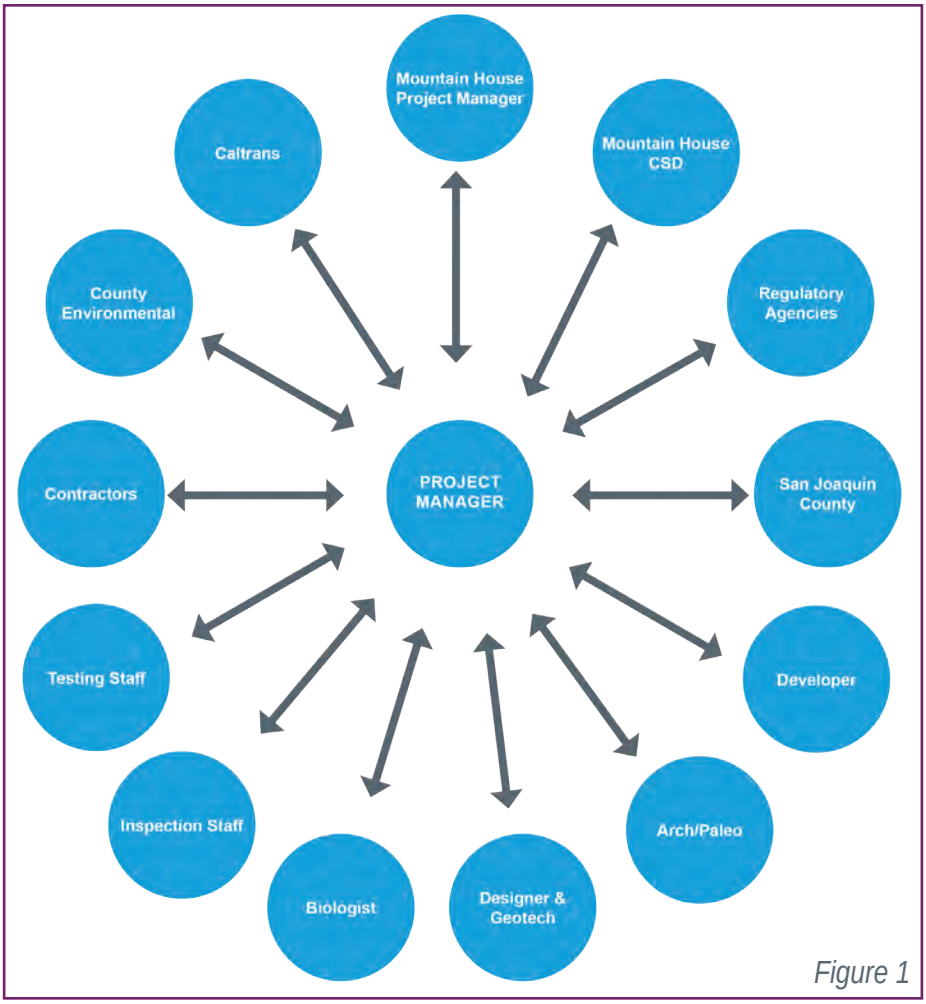


Figure 1

On an as-needed basis, the project facilitator will hold special meetings to provide coordination between subsets of the stakeholder group to ensure continuity in operations, on-time delivery of services from utility providers and specialty consultants, develop work plans for high-risk activities, and resolve technical or constructability issues.

Communication

Communication is the most crucial part of any project. The key to effective communication is to provide a simple way to institute collaboration and direct decision making at the same time. We will accomplish this through weekly coordination meetings (hosted by the project facilitator) with all stakeholders and efficiently processing information to and from MHCSD and developer decision-makers. It will be the facilitator's responsibility to communicate between the field and MHCSD, coordinate information with the various stakeholders, and manage the "open items" list such that projects move smoothly, appropriate stakeholders are properly informed, and decisions are communicated timely so that everybody involved is working from the same understanding and agreements.

Our inspection staff will maintain a high level of communication with the construction staff, specialty consultants, and other agency representatives on the site. Each inspector will meet with each crew at the beginning of each shift to review the plan for the day, verify the level of inspection necessary, and develop a consensus on the timing of inspection. Each inspector will follow up at the end of each shift to verify that

all required inspection has been completed, review tentative plan for the following day, and remedial plans for any inspection missed or failing work product not previously discussed. This process has been successful in minimizing delays and re-work by increasing collaboration between inspectors and crew while saving time and money.

The project facilitator will meet with each inspector daily to review workload, quality control issues, or any other concerns that would affect safety, quality, productivity or environmental compliance. Should there be field issues that cannot be resolved during the same shift within previously approved parameters, the project facilitator will work with MHCSD, developer, and contractor staff to review and resolve the issue in a professional and efficient manner. The resolution will be documented in Procore as a closed review item, distributed to all stakeholders as well as noted on the current electronic plan set and specifications.

Schedules are also a valuable communication tool. The project facilitator will develop and manage a project schedule that communicates the status of all construction activities, inspection staffing levels, improvement plan status, regulatory approvals, and utility agreements. The schedule will be in a full project schedule, with year and month time scale format and a two-week look ahead format that provides a more detailed look at field activities and project document due dates

Consistency

Consistency is the natural result of good continuity and communication. Conveying information through one project communicator who utilizes a direct communication strategy for disseminating information ensures that all projects are working within the same project information and their end product will match properly with adjacent projects. This minimizes field adjustments and changes, reduces project duration, and keeps maintenance costs down by reducing or eliminating “one-time fixes” to solve an alignment or fit issue.

Maintaining consistent lines of communication and processes allows the team to work with confidence, which increases efficiency and reduces errors. Being able to rely on regular communication and consistent processes builds trust within the team. That trust produces a collaborative environment that fosters teamwork, high productivity, and high-quality construction. The project Facilitator will maintain regular communication with project stakeholders in a timely and efficient manner.

Cost Control

Construction Cost Control is a product of maximizing Constructability, maintaining Continuity throughout the process, effective and efficient Communication, and building our projects with a high level of Consistency. Following this plan will ensure that project objectives are met in timely fashion and with the level of quality required for long lasting and efficient operation of the MHCSD owned facilities at the lowest possible construction cost. This will also provide the most expedient path to building permits for the Developers, which is one the primary goals shared by all stakeholders.

These are also the keys to controlling inspection costs. Resolving constructability issues prior to the start of work will reduce inspection costs by reducing re-work. The same is true with continuity. Overtime inspection can be a significant cost escalator for development projects. Frequently the contractor or developer will elect to work a 50- or 60- hour work week to expedite the project. As part of our daily meetings between the facilitator, inspectors, material testers, and construction crews, we will work to plan inspection of work during an 8-hour shift whenever possible. The project facilitator will be the hub for daily communication between the inspectors, contractor, MHCSD, and the developer representative. Through that communication, the project facilitator will develop a consensus on whether overtime inspection is the best value for the project and coordinate inspection accordingly.

5. Summary

With a reliable structure for staff allocation and the "Five C's" noted above to keep the inspection staff and project stakeholders focused on the successful completion of the project, we have developed a system that will ensure proper staffing and cost-effective inspection and management under all circumstances that may arise. Although technology has provided many tools to increase our effectiveness when our team is functioning at separate locations, face-to-face interaction is still a critical component of construction projects. In addition to having a hierarchal structure for communication and management of the work, there is a functional advantage to a physical center of activity for a series of projects this large. Ideally, a construction office located at a convenient location within the project limits would house all construction management and inspection staff. This office would provide space for the project facilitator, an area for inspectors, and a conference room large enough to hold status and coordination meetings that can include provision for stakeholders from all active or affected projects and properties. This facility would serve as a single point of contact for all project-level issues, provide storage for all active project documents (with copies to MHCSD as necessary and/or web-hosted document access), and create a physical funneling of information to and from the MHCSD.

QUALITY CONTROL/ QUALITY ASSURANCE

As the construction commences, it is the responsibility of the contractor to provide quality control checks to verify the work is performed in conformance with the plans and specifications. The TRC team has experience to verify all quality assurance steps are in place to avoid any questions that may arise during construction.

We will monitor the quality of the work to verify the project meets the needs and expectations of MHCSD. A construction quality assurance process includes periodic formal reviews of the contractor's implementation of the quality control plan and material testing. The results of these reviews will be documented, corrective actions may be considered, and any corrective actions taken will be monitored. In addition, the team will:

- **Review contractor quality control plan.** The construction manager will review the steps taken by the contractor as outlined in their quality control plan to verify that the work meets all requirements.
- **Develop quality assurance checks.** As the contractor begins construction, checks to make sure that the work is in conformance with the plans and specifications are imperative. If not implemented, the construction manager works with the contractor and project manager to develop a list that meets the requirements of each specific item of work being constructed, such as line and grade, compaction, conduit, and wiring installation, welding, coating applications, and testing.
- **Review quality at each construction meeting.** As part of the weekly construction meetings, quality will be discussed, and any work that is not in conformance will be followed up with an action plan to either bring the work into conformance or remove the work and reconstruct it to meet the requirements of the plans and specifications.
- **Submittals for materials/equipment.** Quality checks include confirming that the materials and equipment used on the project are reviewed and approved by the design engineer. This quality check certifies that the material and equipment are in conformance and minimizes issues that can arise after the work has been completed.

To support the above process, TRC has another proven tool in place. Our Quality Procedure Manual (QPM) is used to provide TRC construction managers, inspectors, and support staff with a source of reference to standardize inspection and quality control procedures on all TRC projects. This manual covers construction management aspects that can be applied to any construction project. It is used as the basis to customize an organized and complete set of records and procedures for each TRC project.

CONTRACTOR'S PROJECT SCHEDULE REVIEW

On each of our projects, TRC successfully implements comprehensive project controls to help manage the critical issues of time, cost, scope, quality, and safety. As time is money, we focus on efficiently keeping projects on schedule to realize cost savings. Through timely constructability reviews during project initiation and start-up; effective utility coordination; the resolution of project issues at the lowest level of management - at the project site; and expert management of potential claims - our projects are kept on schedule and budget. We will utilize our expertise to ensure that each project is constructed efficiently, safely, and on schedule.

TRC works closely with the contractor to make certain that schedule control measures and management techniques are in place to accurately plan, monitor, and report performance throughout construction.

TRC will perform a detailed review of the contractor's schedule to assess logic between activities, key activity durations to determine whether or not they are realistic, and verify that the critical path complies with the contract documents. TRC will confirm that all specified construction sequencing and schedule constraints, permit conditions, interfacing with adjacent contracts, and all submittals, procurement, construction, shut-downs and tie-ins, testing and start-up, and closeout activities are included for all contract work. **We will also verify that the schedule meets all funding milestones and deadlines.**

During construction, we will review the monthly schedule updates to confirm the progress of construction, including start and finish dates for the activities, changed logic ties, any delays encountered, and other potential impacts. If impacts to the schedule appear imminent, we will immediately schedule meetings with the contractor to discuss alternatives, including the use of additional shifts or manpower, if necessary.

Once the baseline schedule is approved, it will serve as the blueprint for the contractor's approach to constructing the project and will be used to evaluate potential delays and work-around strategies to mitigate delay impacts. If impacts to alternatives, including the use of additional shifts or manpower, if necessary.

Monthly schedule updates will be reviewed for accuracy against the project records such as daily field reports, pour records, and other documentation. We will confirm that weather days, contract change orders, and work re-sequencing has been included so that impacts to the critical path can be accurately assessed. Our project manager/resident engineer will instruct the contractor to prepare a recovery schedule when any critical path activity falls more than two weeks behind schedule. The project manager will monitor the recovery schedule's effectiveness in keeping construction activities on track.

ACCOUNTING AND BILLING PROCEDURES

TRC utilizes the Deltek Vision Accounting System, which is software geared for engineering firms. In combination with Vision, TRC utilizes ADP, which provides a cost rate link from Vision and timesheets to automate prevailing wages per the Department of Industrial Relations prevailing wage law. TRC undergoes an independent annual audit to ensure the adequacy of accounting practices, procedures, and records that are in conformance with Generally Accepted Accounting Practices (GAAP) and Government Accounting and Cost Accounting Standards.

The key to timely and accurate client invoicing is Vision's project and labor coding system, which segregates labor and other direct costs (ODC) according to the clients' invoicing requests and the detailed non-prevailing and prevailing wage labor codes that link to prevailing wage law. Depending on the complexity of the invoices and supporting documentation required, TRC's Accounting Department strives to have all invoices processed and submitted for TRC's project managers' approval by the 15th of the month. TRC's policies for all components of a client's invoice are as follows:

- **Timesheets:** TRC follows a Saturday through Friday workweek. Employees are required to enter time worked daily and submit timesheets weekly. Accounting reviews the timesheets for accurate straight time, overtime, special shifts, accurate Vision labor codes, etc., as well as the supervisors' review for accuracy with a deadline of 9:00 AM Monday morning for time reported the previous workweek. The timesheets are linked with the prevailing wages, uploaded to payroll, payroll is processed, and certified payroll reports are generated.
- **Subconsultants:** are required to submit invoices by the 5th day of the month following the month to be invoiced. The project's Accounting Billing Representative and Accounts Payables review the invoice and supporting documentation for accuracy and adherence to prevailing wage law. Additional checks are to ensure that current certificates of insurances per the contract are in place.
- **Employees' Expense Reports:** are also due by the 5th day of the month. Accounting reviews for accuracy and adequate supporting documentation, including all IRS requirements. The expense report is then submitted to the employee's supervisor, who reviews and approves within two days of receipt.

While TRC is a professional service firm, because of adherence to prevailing wages and other construction management-related activities, the software, policies, and procedures must include adequate cost accounting systems. This is accomplished through a multi-level labor and ODC code system that accumulates and segregates costs according to project requirements and client requests (funding sources, task orders, etc.) while incorporating a reliable, consistent, and audit-able cost tracking system that can be cross-referenced to all supporting documentation.

In addition to a robust and flexible cost accounting and billing system, Procore allows us to set up our construction management and field reporting in the same project organization, so the two systems are completely correlated, and reports contain the same project numbers, names, descriptions and charge codes/time.

REFERENCES FOR RELATED SERVICES

(name and e-mail)

We welcome MHCSD to contact our current and past clients to inquire on our team's ability to provide similar services, and their past successes.

ON-CALL CONSTRUCTION MANAGEMENT
Lincoln, CA

Ray Leftwich, City Engineer (Retired)
City of Lincoln
personal tel.: 916.295.0220

ON-CALL CONSTRUCTION ADMINISTRATION
Lathrop, CA

Glenn Gebhardt, City Engineer
City of Lathrop
e: GGebhardt@ci.lathrop.ca.us

ON-CALL CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES
Modesto, CA

Greg Showerman, Senior Civil Engineer
City of Modesto
e: gshowerman@modestogov.com

CONSTRUCTION INSPECTION AND PROJECT FACILITATION SERVICES – PLACER COUNTY COMMUNITY DEVELOPMENT RESOURCE AGENCY
Placer County, CA

Adrian Compton, Engineering Manager
Community Development Resource Agency (CDRA)
Placer County - Engineering and Surveying Division
e: ACompton@placer.ca.gov

RESUMES FOR KEY STAFF

TRC

D. RESUMES FOR KEY STAFF

EXPERIENCED PROJECT TEAM

TRC's key project staff have been selected for their experience successfully delivering master-planned development projects with large infrastructure throughout Northern California. They have experience with the many facets of typical development as well as direct experience with many geological variations on the site and local agencies that are involved. They take a pro-active and team-based approach to the work that reduces the risk of re-work, provides a positive work environment, and results in a higher quality finished product in a safe and cost-effective manner. Our staff understands that constant communication with the contractor, developer, the County, and other project stakeholders are key to a successful project. They apply these skills to identify and implement opportunities to accelerate project delivery, increase efficiency, improve quality, and quickly and efficiently complete the project close-out process. Their leadership will ensure that the project's safety, scope, schedule, budget, and quality remain tightly controlled.

Our team's experience with the critical elements of this project includes typical infrastructure improvement work as well as major frontage improvements, parks, traffic signalization, off-site sewer trunk lines, lift stations and force mains, domestic and recycled water transmission lines, storage tanks, pressure reducing stations, pump stations, metering stations, utility relocations, landscaping, and retaining walls. In addition, our staff brings extensive experience coordinating and negotiating with the many regulatory agencies that typically affect development projects, including the Regional Water Quality Control Boards, California Air Resources Board, PG&E, Caltrans, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife. Their long-term established working relationships with responsible agencies will facilitate timely coordination and swift resolution of potential issues.

LINCOLN LEAMAN

Principal-In-Charge and Contract/Project Manager

YEARS WITH FIRM: 10
YEARS OF EXPERIENCE: 30

EDUCATION
B.S., Civil Engineering, University of Pittsburgh

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- Professional Engineer, California No. 79543
- Qualified SWPPP Developer/Practitioner (QSD/P)
- Army Corps of Engineers Construction Quality Management
- California General Engineering Contractor License

Mr. Leaman has 30 years of experience in the planning, construction, and management of a broad range of capital improvement projects, including master-planned developments, transportation (bridges, highways, local streets, and streetscapes), recreation (parks), underground utilities, and water-related (sewer lift stations and plant commissioning and decommissioning) projects. Mr. Leaman has served as project manager, resident engineer, and structures representative responsible for leading teams of varying sizes. Many of his projects have included new or innovative uses of construction materials and techniques. He has demonstrated expertise in identifying critical elements to keep projects on schedule and constructed within budget. Lincoln is an excellent relationship builder with strong negotiation skills in both public and private arenas. He is well versed in a variety of project management, accounting, and estimating software applications.

REPRESENTATIVE EXPERIENCE
- City of Lincoln, Sorrento Master Planned Community – Lincoln, CA
- City of Lincoln, Moore Road Reconstruction and Trunk Line Sewer Extension – Lincoln, CA
- City of Lincoln, 12 Bridges Villages 1, 2, 10, 13, 23, 25, Turkey Creek and Independence – Lincoln, CA
- City of Lathrop, Infrastructure for River Islands Master Planned Development – Lathrop, CA

DUSTIN RATH, PE, GE, QSD/P

Internal Quality Assurance/Geotechnical

YEARS WITH FIRM: 7
YEARS OF EXPERIENCE: 24

EDUCATION
BS, Civil Engineering, San Diego State University

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- Professional Engineer (Civil),California, No. C70864
- Geotechnical Engineer, California, No. GE2988
- OSHA HAZWOPER 40-Hour Training
- Cal/OSHA 10-hour Construction Safety (OSHA 10)
- Qualified SWPPP Developer/Practitioner (QSD/QSP), No. 23291
- CIPP Inspector Certification (NASSCO), No. CIPP-0717-0202139

Mr. Rath has 24 years of providing engineering and construction management services for a wide range of projects, including educational and civic facilities, swimming pools, bridges, dam and levees, roadway improvements, pipelines, tanks, and tunnels. Mr. Rath has extensive experience providing geotechnical design, oversight, and expertise for adverse ground conditions, including lime and cement treatment, horizontal directional drilling (HDD), trenching, settlement, groundwater intrusion, deep foundations, landslide mitigation, liquefaction, slope stability, and compaction. He provides civil/geotechnical/structural engineering expertise to support effective problem solving and has a strong understanding of the California Building Code, practices and principals of construction best practices, and standard practice for contract administration of municipal construction.

REPRESENTATIVE EXPERIENCE
- City of Lincoln, Tank #3 Catta Verdera North – Lincoln, CA
- County of Sonoma,On-Call Construction Management – Sonoma County, CA
- City of Larkspur, Rose Garde Infill Development Project – Larkspur, CA
- Counties of El Dorado and Nevada, On-Call Construction Management Services – El Dorado and Nevada Counties, CA

JUSTIN WEHLING

Lead Construction Inspector

YEARS WITH FIRM: 12
YEARS OF EXPERIENCE: 21

EDUCATION
General Studies, Horizon Instructional Systems

SPECIALIZED TRAINING
- Confined Space Entry
- 10-Hour OSHA Training
- Training in ADA Compliance and Trench Safety
- Caltrans Training
- Storm Water Pollution Prevention Program (SWPPP) Training
- Environmental Training
- CPR, AED, First Aid Training

Mr. Wehling has over 20 years of experience working as an accomplished construction inspector and manager. He has strong communication skills (both written and oral), works well independently and in a team atmosphere. Justin can effectively manage multiple projects at any given time. He has inspected and observed multiple crews on multiple sites for projects involving all aspects of city infrastructure, such as sewers, storm drains, potable water, reclaimed water, curbs & gutters, sidewalk and AC roadways, ADA compliance, and similar items on city capital improvement projects, developer projects, and Caltrans projects. Mr. Wehling has extensive experience communicating with State inspectors, Caltrans inspectors, City inspectors and project superintendents/management. His peers rate him highly for his technical knowledge and communication skills.

REPRESENTATIVE EXPERIENCE
- City of Lathrop, Infrastructure for River Islands Master Planned Development – Lathrop, CA
- City of Modesto, Standiford Avenue Pavement Rehabilitation – Modesto, CA
- City of Modesto, Lakewood Neighborhood Street Improvements – Modesto, CA
- City of Lincoln, Development and Capital Improvements Inspection – Lincoln, CA

GARRETT DAVIS

Inspector

YEARS WITH FIRM: 3
YEARS OF EXPERIENCE: 18

EDUCATION
High School Diploma, Upland High School

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- CAL/OSHA Permit Confined Space – Competent Person
- Stormwater Pollution Prevention Training

SPECIALIZED TRAINING
- CPR/AED/First Aid (Year)
- CAL/OSHA Permit Confined Space – Competent Person

Mr. Davis is an experienced construction inspector with more than 18 years of experience with public works and infrastructure projects. Prior to being an inspector, Mr. Davis served as a foreman and project engineer for a large regional heavy civil contractor and has in-depth experience with roadway, pipeline, and development projects. Mr. Davis has worked with various public agencies, including projects in the City of Modesto, which ranged from pavement restoration/rehabilitation, ADA ramp reconstruction, storm drain rehabilitation, and park construction. Recently, he provided construction inspection for the City of Lathrop River Islands project that included the installation of wet and dry utilities for over 1,000 single-family residential lots and a middle school. Mr. Davis has extensive experience in submittals, RFIs, daily diaries, ADA compliance, weekly progress reports, and scheduling.

REPRESENTATIVE EXPERIENCE
- City of Lathrop, River Islands Development Stages 2A & 2B – Lathrop, CA
- Marques Pipeline, Inc.

BENJAMIN DEBRUYN

Electrical and Traffic Inspector

YEARS WITH FIRM: 3
YEARS OF EXPERIENCE: 33

EDUCATION
Millwright Diploma, South Africa

Journey Electrician N4 Diploma, South Africa

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- Electrical State Certification, California

Mr. DeBruyn has 33 years of experience in the construction industry providing inspection services and serving as a foreman on public works improvements. He specializes in electrical inspection. Mr. DeBruyn's portfolio includes a wide range of projects, including highway, roadway, and bridge improvements; installation of traffic signals and streetlights; inspection and repair of traffic signals; layout of electrical panels; and installation of wiring for residential, commercial and industrial developments. He has a strong understanding of the Caltrans Standard Plans and Standard Specifications and contract administration in accordance with the Caltrans Construction Manual and Local Assistance Procedures Manual.

Mr. DeBruyn is experienced in all aspects of field and office construction engineering work, including inspection of non-structural construction operations, traffic control system compliance, contract change order preparation, and SWPPP compliance monitoring and enforcement. He is capable of reviewing, inspecting, and approving traffic control systems, including lane closures. He is knowledgeable and experienced in equipment used in construction inspection, surveying, field testing of construction materials, and construction office engineering. He has a good working knowledge of computer software programs; critical path method (CPM) software; and the Storm Water Pollution Prevention Program and the Construction General Permit.

REPRESENTATIVE EXPERIENCE
- Various Clients, Multiple Residential, Commercial, and Industrial Wiring Upgrades – Northern CA

BRANDYN McCARY

Inspector

YEARS WITH FIRM: 3
YEARS OF EXPERIENCE: 19

EDUCATION
Certification in Residential Construction Technology, Sierra College

SPECIALIZED TRAINING
- OSHA 30
- Contractor License B955675
- Caltrans for CAL 125, 216, 231, 375, 504, 518, 533, 539, 540, 543, 556, 557
- ICBO/ICC
- ACI
- Nuclear Gauge Operator

Mr. McCary has 19 years of construction and inspection experience specializing in quality control, contract management, project budgets, project management, SWPPP, and community relations. Progressively responsible experience demonstrates a consistent pattern of success, in addition to a model of proven leadership, communication, and team-building skills.

REPRESENTATIVE EXPERIENCE
- City of Lincoln, Tank #3 at Catta Verdera North – Lincoln, CA
- City of Lathrop, River Islands Stage 1, 1A, 1B, and 2A Infrastructure – Lathrop, CA
- City of Lincoln, Dr. Nathan Dublin Neighborhood Park – Lincoln, CA

ED PALMA

Inspector

YEARS WITH FIRM: 8
YEARS OF EXPERIENCE: 20

EDUCATION
Building Inspection Technology and Construction Management, Cosumnes River College

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- International Code Council (ICC) Structural Masonry Special Inspector, No. 5280570-x4
- ICC Structural Steel & Welding Special Inspector, No. 5280570-85
- ICC Reinforced Concrete Special Inspector, No. 5280570-49
- International Code Council (ICC) Prestressed Concrete Special Inspector, No. 5280570-92
- CPN Nuclear Gauge, No. 37098

Mr. Palma has 20 years of experience in the construction industry working as a lead inspector, a supervising inspector, a senior materials tester, and a senior special inspector. His inspection experience includes state highway and public works construction projects, embankment construction/restorations, seepage berms, levee repairs, cutoff walls, deep soil mixing walls, demolition, tree removal projects, reinforced concrete pipe, welded steel pipes, rebar inspections, concrete pours, controlled density fills, welding, box culverts, and significant asphalt paving experience. Mr. Palma has performed constructability reviews, notice of potential claim reviews and time and material claims. He is familiar with construction staking, SWPPP's, traffic control requirements, materials testing for concrete, soil, aggregate base rock, lime treatment, and asphalt for highways and bridges.

REPRESENTATIVE EXPERIENCE
- City of Lincoln, On-Call Construction Management and Inspection Services – Lincoln, CA
- City of Lathrop, Stewart Road Extension – Lathrop, CA
- City of Lincoln, Sorrento Master Planned Community – Lincoln, CA

JACOB PHILLIPS

Inspector

YEARS WITH FIRM: 12
YEARS OF EXPERIENCE: 22

EDUCATION
US Army Military Police School, Ft. McClellan, Alabama

Coursework, Wilrick Institute of Technology, California

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- Certified Welding Inspector QC1, American Welding Society (AWS)
- Certified Special Inspector, Reinforced Concrete, Structural Steel and Welding, Structural High
- Strength Bolting, and Structural Masonry, International Code Council (ICC)
- Certified Concrete Field-Testing Technician, Grade 1, American Concrete Institute (ACI)
- Certified ASNT Non- Destructive Testing, Liquid Penetrant Level 2
- Certified Nuclear Density Gauge Operation

Mr. Phillips has 22 years of experience providing construction inspection and field technician services on large construction and grading projects, including levee erosion repair, soilbentonite embankment and cutoff walls, water treatment plants; roadway widening; and buildings. He is familiar with Department of Water Resource specifications and plans and various governmental specifications and material testing requirements.

REPRESENTATIVE EXPERIENCE
- County of Placer CDRA, Placer Vineyards, Property 1A – West Roseville, CA
- County of Placer, Bell Road Widening – Auburn, CA
- Placer County Water Agency, Bowman Water Treatment Plant – Auburn, CA
- Caltrans District 5, On-Call Professional and Technical Construction Engineering Services – Soledad, CA
- Caltrans District 3, On-Call Professional and Technical Construction Engineering Services – Nevada, Placer, El Dorado, Sacramento, and Yolo Counties, CA

SEAN PRITCHARD

Inspector

YEARS WITH FIRM: 2
YEARS OF EXPERIENCE: 27

SPECIALIZED TRAINING

- OSHA 30
- Contractor License B955675
- Caltrans for CAL 125, 216, 231, 375, 504, 518, 533, 539, 540, 543, 556, 557
- ICBO/ICC
- ACI
- Nuclear Gauge Operator

Mr. Pritchard has 27 years of experience in the construction industry. He has in-depth experience, inspection, quality assurance/quality control, and safety. Mr. Pritchard managed safety protocols and inspections for 17 offices spanning 4 states in the west coast. During his career, he has performed the trades of concrete, finish carpenter, cabinet installer, and low voltage installer. Additionally, Sean has performed construction inspections for projects inspection and testing of earthwork, asphalt concrete paving, roadway sub grades, soils lime/cement treatment, underground utility installation, trench back-fill, reinforced concrete footing, slab on grade, retaining walls, tilt up panels, reinforced masonry, and structural steel welding.

REPRESENTATIVE EXPERIENCE

- City of Lathrop, River Islands Stage 1, 1A, 1B, and 2A Infrastructure – Lathrop, CA
- City of Elk Grove, WPR016 Pavement Rehabilitation at Various Locations – Elk Grove, CA
- City of Sacramento, West Jefferson Boulevard – West Sacramento, CA
- City of Elk Grove, On-Call Materials Testing Contract – Elk Grove, CA
- Del Webb Sun City, Lincoln Hills – Lincoln, CA

GUILLERMO PUERTA-FALLA, Ph.D, PE

Special Source Inspection

YEARS WITH FIRM: 2
YEARS OF EXPERIENCE: 4

EDUCATION

Ph.D, Civil Engineering,
University of California, Los Angeles

M.Sc., Civil Engineering,
University of Wisconsin, Milwaukee

B.S., Civil Engineering, Universidad Nacional de Columbia

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

- CA, Civil Engineer, No. C89128
- PCI Quality Control Inspector Level II, No. 16885
- PCI Quality Control Inspector Level I, No. 16886
- ACI Concrete Field Testing Technician-Grade I, No. 01334724

Dr. Puerta-Falla brings recent experience as a consultant serving as a Bridge and Roadway Materials Engineer (Representative) for the Materials Engineering and Testing Services (METS) group of Caltrans. His experience has specifically been within the METS Office of Structural Materials (OSM), Quality Assurance and Source Inspection (QASI) Branch, having been assigned a number of projects within Caltrans Districts 8 and 9, and has served in a supporting role for projects in Districts 7 and 12. Dr. Puerta-Falla has extensive knowledge in materials engineering related to structural steel, precast/prestressed concrete, roadway structures, and variety of bridge components. Overall, Dr. Puerta-Falla has served in a consultant capacity to clients providing technical oversight and recommendations during the fabrication of structural materials as part of his quality assurance (QA) role, and oversees the activities of QA inspectors who perform source inspection at designated fabrication facilities.

REPRESENTATIVE EXPERIENCE

- A&E On-Call/Statewide Contract 59A1045, Caltrans METS District 59 - Los Angeles, CA

BENJAMIN REEVES

Inspector

YEARS WITH FIRM: < 1 year
YEARS OF EXPERIENCE: 15

EDUCATION
B.S., Information Technology, University of Phoenix

A.S., Electronic Engineering Technology,
ITT Technical Institute

Mr. Reeves has 15 years of experience providing construction inspection and field technician services on large construction and grading projects. Benjamin is experienced with various Quality Control Programs. He is familiar with Caltrans and Army Corp of Engineers specifications and plans and various governmental specifications and material testing requirements.

REPRESENTATIVE EXPERIENCE:

- Various Clients, Senior Field Technician/Inspector for soils and asphalt projects including paving, utility installation, and general soils grading for city, school, hospital, and commercial projects – Multiple Locations, CA
- Quality Control Inspector, daily pre-pour and post-pour inspections – CA
- Consultant to Caltrans for the Rocklin Materials Testing Laboratory performed both field and lab testing on soil, aggregate, and asphalt. – Multiple Locations, CA

DWIGHT SMITH

Electrical and Traffic Inspector

YEARS WITH FIRM: 13 year
YEARS OF EXPERIENCE: 52

EDUCATION
Various Coursework,
County of Sacramento Management Training

Caltrans Resident Engineers Academy,
Caltrans District 3 Headquarters

High School Diploma, Western High School

Mr. Smith has 50 years of construction experience, including 32 years as an inspector of projects for public agencies. Of the 200+ roadway projects he has inspected, over 50 percent have involved his direct inspection of signals and/or lighting. Mr. Smith's background includes performing constructability reviews and construction management of state highways, city street improvements, utility relocations and joint trench construction, earthwork operations, traffic control, signals and lighting, and contract administration. He is familiar with Caltrans Standard Plans and Specifications and is thoroughly familiar with the National Electrical Code. He has thorough knowledge of highway construction, drainage systems, traffic signals, street lighting, traffic operations systems, ramp metering, highway lighting systems, overhead sign illumination, fiber-optic installation and video systems, Roadside Weather Information Systems (RWIS), Closed Circuit Television Systems (CCTV), and Hazard Advisory Radio Systems (HARS).

REPRESENTATIVE EXPERIENCE:

- County of El Dorado, US 50 Silva Valley Parkway Interchange, Phase 1 – El Dorado, CA
- City of Lathrop, Lathrop Road Grade Separation – Lathrop, CA
- City of Lathrop, Lathrop Road Widening and Signal Improvements – Lathrop, CA
- City of Lathrop, On-Call Construction Administration Support – Lathrop, CA

TRACY STEVERSON

Inspector

YEARS WITH FIRM: 3
YEARS OF EXPERIENCE: 19

EDUCATION
General Education, Contra Costa College

General Education, Las Positas College

SPECIALIZED TRAINING
- General Code of Operating Regulations (GCOR)
- Railroad Workplace Safety (CFR 214 FOR RWP)
- BART 16-Hour Trackway Safety Training
- OSHA 30-Hour Safety Training

Ms. Steverson has 19 years of experience and progressive responsibility as construction inspector and as quality assurance representative. Her qualifications include extensive field investigation and construction management, design, permitting, quality assurance, and project management. She is familiar with mass transportation project types, specifications and governmental specifications and materials testing requirements.

REPRESENTATIVE EXPERIENCE
- Bay Area Rapid Transit District, Hayward Maintenance Project – Hayward, CA
- Peninsula Corridor Joint Powers Board, CBOSS PTC – Menlo Park, CA
- Caltrain, 25TH Avenue Grade Separation – San Mateo, CA
- Bay Area Rapid Transit, Oakland International Airport Connector – Oakland, CA
- Bay Area Rapid Transit, Earthquake Safety Program/ North Oakland Aerials Seismic Retrofit Project – Oakland, CA
- Peninsula Corridor Joint Powers Board, Various Projects – San Jose, CA

KITT TONGTHAWORN, PE, SE, QSD, LEED AP

Structural Engineer

YEARS WITH FIRM: 5
YEARS OF EXPERIENCE: 25

EDUCATION
M.S., Civil Engineer, California State University, San Jose,

B.S., Civil Engineering, California State University, San Francisco,

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- Professional Engineer, California, No. 60765
- Structural Engineer, California, No. 5222
- Professional Engineer, Hawaii, No. 13572
- Professional Engineer, Thailand, No. 2542
- Qualified Stormwater Developer (QSD), No. 60765
- LEED Accredited Professional
- Caltrain, RWP No. 004566

Mr. Tongthaworn has 25 years of experience providing civil engineering, structural engineering, and construction management services for bridge and highway projects designed and constructed to the standards of Caltrans and the Federal Highway Administration. Mr. Tongthaworn has extensive experience in construction oversight. He provides pre-construction, construction, and post construction services, including review of plans and specifications, constructability analysis, engineer's cost estimates, value engineering, construction administration, interpretation of CPM schedules, construction schedule monitoring, construction inspection, quality assurance/ quality control, utility coordination and relocation, development of punch lists, as-built drawings, and analysis of claims and project close-out.

REPRESENTATIVE EXPERIENCE
- County of San Joaquin, State Route 132/Bird Road Interchange – Tracy, CA
- Caltrans District 10, State Route 4 Crosstown Viaduct – Stockton, CA
- Peninsula Corridor Joint Powers Board, 25th Avenue Grade Separation – San Mateo, CA

MATTHEW TSUGAWA, RLA, QSD/P

Landscape Architect

YEARS WITH FIRM: 6
YEARS OF EXPERIENCE: 30

EDUCATION
Local Assistance Resident Engineer Academy

BS, Landscape Architecture,
California State Polytechnic University, Pomona

BA, Studio Arts, University of California, Santa Barbara

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
- California Professional Landscape Architect (RLA) License No. 2982
- Arizona Professional Landscape Architect (RLA) License No. 2800
- Qualified SWPPP Developer and Practitioner (QSD/P), CASQA, #00987
- The National Association of Sewer Service Companies (NASSCO), Inspector Training & Certificate Program (ITCP) for the Inspection of Cured-in-Place-Pipe (CIPP) Installations

Mr. Tsugawa has more than 30 years of experience in the areas of landscape architecture, construction administration and inspection. His noted experience includes design development, project management, construction inspection, and consultant contract administration for Caltrans and local municipalities. He has provided construction inspection experience that included on-site inspection and monitoring of means and methods of installation, materials, and quality of workmanship for compliance with project plans and specifications, quantity verification, contract change order administration, field investigations, contract dispute resolution, material inspection, construction safety, project reporting and documentation, and preparation of pay estimate quantities.

REPRESENTATIVE EXPERIENCE
- City of Lincoln, Nathan Dubin Neighborhood Park, Lincoln, CA
- City of Lincoln, Robert “Chief” Jimenez Community Park, Phase II, Lincoln, CA

BrightView

JEFFREY GILLESPIE

Landscape Inspector

Reliable, versatile, and conscientious Production Manager with over forty years of experience in landscape installation, maintenance, consultant, and inspection for new and existing landscape projects.

Length of Employment In the Industry since: 40 years
Joined BrightView: 2013

Specialized Skills
- Plant Culture and Identification
- Irrigation installation and maintenance with proper water management
- Updated horticultural practices
- Read, interpret, and implement construction plans and specifications

REPRESENTATIVE EXPERIENCE
BrightView Landscape Services
Associate Production Manager – performing landscape consulting and inspections for Mountain House Community Services District, including daily inspection reports.

JERRY OLIVER , OPERATIONS MANAGER

Mr. Oliver brings over 12 years of experience to Twining. His experience encompasses concrete, soils, asphalt, and aggregate testing. Jerry holds an extensive number of certifications and is an excellent laboratory technician as well as field technician. He also has extensive plant experience due to over five years' experience working for material suppliers across the state of California.

Length of Employment In the Industry since: 2009
Joined Twining in: 2017

Professional Licenses

- ACI Concrete Field Technician, Grade I
- AASHTO Certifications: T84, T85, T96, T210, T283, T304, T312, T324
- ASTM Certifications: D4791
- Caltrans Certifications: 206, 207, 211, 212, 231, 234, 235, 304, 306, 308, 309, 366, 370, 375, 382, 384, 504, 518, 521, 523, 524, 533, 539, 540, 541, 543, 556, 557

Project Experience

- U.S. Department of Transportation Federal Highway Administration, Valley Loop and El Portal Road, Yosemite National Park
- El Dorado County Department of Transportation, Wester Placerville Alignment Project
- City of Livermore, 2019 Street Resurfacing
- Caltrans District 10, SR120 Union Road Interchange Project
- Caltrans District 10, Route 99 Stanislaus County
- Caltrans District 5, Route 101 Monterey County
- Caltrans District 4, CT 04-264094 San Antonio Creek, Sonoma and Marina Counties 7

GABRIEL S. HERNANDEZ, PE, PROJECT MANAGER

Mr. Hernandez brings over 16 years of experience performing and supervising complex quality control and quality assurance material testing and special inspections related to the construction of public schools, hospitals, commercial retail facilities, transportation, utility and industrial (gas and electric) projects located throughout Northern California. As a project engineer, Gabriel is responsible for the technical quality of geotechnical, special inspection, and construction materials testing projects, as well as oversight. His duties include geotechnical engineering analysis and design, project management, client service, project team development, budget management, and resource coordination.

Length of Employment In the Industry since: 2005
Joined Twining in: 2018

Professional Licenses

- Professional Engineer, Civil, CA, RCE 73201
- ICC Soils
- Radiation Safety, Nuclear Gauge CPN No. 46117
- CAL OSHA 10 Construction
- Certified F Number Technician
- ORMCA Concrete Technician Level 2
- Ohio Department of Transportation, Geotechnical Consultant Workshop
- Intertek Back Protection
- Intertek Global Harmonic System
- Intertek Phishing 101 Training
- Intertek Information Security Awareness Training
- Intertek Code of Ethics v2017

Education

MS, Geotechnical Engineering,
University of California, Berkeley

BS, Civil Engineering, Structures,
University of California, Berkeley

ANDREI POLISCHUK, SPECIAL INSPECTOR

Mr. Polischuk brings more than 10 years of experience to Twining. Andrei has a strong working knowledge of construction materials and technologies, having worked as carpenter prior to becoming an inspector. This experience helps him to read and interpret construction drawings and specifications, giving him a thorough understanding of each project, he inspects.

Length of Employment In the Industry since: 2011
Joined Twining in: 2015

Professional Licenses

- ACI Aggregate Testing Technician - Level 1
- ACI Concrete Field-Testing Technician - Grade I
- ACI Concrete Laboratory Testing Technician - Level 1
- ACI Concrete Strength Testing Technician
- ACI Concrete Transportation Construction Inspector
- ICC Structural Masonry
- ICC Structural Steel and Bolting
- ICC Soils
- ICC Structural Welding
- ICC Prestressed Concrete
- ICC Reinforced Concrete
- ICC Spray Applied Fire Proofing
- ICC Commercial Building Inspector
- ICC Master of Special Inspection
- DSA Masonry
- Caltrans Certificates: 105, 125 AGG, 125 GEN, 201 521, 523.1, 523.2, 524
- Twining Nuke Gage Safety

Project Experience

- City of Sacramento, Community Center Theater
- City of Sacramento, Convention Center Renovation
- Sacramento International Airport, New Fire Station
- City of Sacramento, Memorial Auditorium Renovation
- City of Elk Grove, Aquatic Complex
- City of Millbrae, Recreation Center
- County of Sacramento, Airport Aircraft Rescue Fire Fighting

AARON ALMANZA, FIELD TECHNICIAN

Mr. Almanza brings over seven years of experience to Twining, with experience in both the field and laboratory inspections. He is highly skillful in concrete, soils, asphalt, and aggregate testing. He performs various field and laboratory testing procedures per Caltrans and ASTM test methods on soil, concrete, and aggregates.

Length of Employment In the Industry since: 2014
Joined Twining in: 2016

Professional Licenses

- ACI Concrete Field Testing Technician - Grade I
- Caltrans Certifications: 105, 125 AGG, 125 GEN, 201, 202, 205, 216, 217, 226, 227, 229, 231, 301, 375, 504, 518, 521, 523, 524, 533, 539, 540, 543, 556, 557

Project Experience

- Monterey County, Caltrans 05-1C8904 Route 101
- Caltrans District 3, Route 193, El Dorado County
- City and County of San Francisco, Caltrans 04-3E6024 Route 101
- City of San Ramon, 2020 Pavement Management Project
- City of San Jose, Street Resurfacing 2019
- Federated Indians of the Graton Rancheria, Graton Rancheria Back of House Expansion
- City of Sacramento, Memorial Auditorium Renovation

QUENTIN MATHIS , SPECIAL INSPECTOR

Mr. Mathis brings over 30 years of experience to Twining. His experience encompasses all aspects of testing and inspection with special emphasis in asphalt and concrete. With multiple certifications, Shane is able to perform multiple inspections for one project. His technical capabilities include soils, spray applied fireproofing, reinforced concrete, and steel and bolting inspections.

Length of Employment In the Industry since: 1991
Joined Twining in: 2017

Professional Licenses

- ACI Concrete Field Testing Technician Grade I
- ICC Reinforced Concrete
- ICC Structural Steel and Bolting
- ICC Structural Masonry
- ICC Spray Applied Fireproofing
- ICC Soils

Project Experience

- City of Sacramento, Convention Center Renovation
- City of Sacramento, Community Center Theater
- City of Sacramento, Memorial Auditorium Renovation
- Tahoe Transportation District, Truckee River Bridge Project
- County of Sacramento, Hazel Avenue Bridge Improvements Project

CHRISTOPHER THOMAS , FIELD TECHNICIAN

Mr. Thomas brings over 29 years of experience and technical expertise to Twining. His experience encompasses all aspects of testing and inspection with a special emphasis in concrete and soils.

Length of Employment In the Industry since: 1992
Joined Twining in: 2016

Professional Licenses

- ACI Concrete Strength Testing Technician
- OSHA Hazmat
- Caltrans: 125 AGG, 125 GEN, 231, 375

Project Experience

- City of Sacramento, 3rd Street Sewer Relief
- City of Elk Grove, Railroad Street and Old Town Plaza
- Placer County, Walerga Road Bridge Replacement
- Armstrong Properties, Sutterville Road and Franklin Boulevard
- Napa Unified School District, Solar Panels
- State of California, Stockton Prison
- Mather Air Force Base, VA Expansion and Mental Health Center

FEHR PEERS

KRISTIN CALIA, PE, TE, PRINCIPAL

Ms. Calia, PE, TE, is a Principal based in the Fehr & Peers Roseville office. She has over 25 years of traffic engineering experience and has been working for Fehr & Peers for 22 years. Ms. Calia specializes in traffic signal systems, streetscape and lighting designs, multi-modal projects, and roadway signing and striping and has been responsible for the design of hundreds of traffic engineering projects throughout California. Ms. Calia has designed and managed projects ranging from single traffic signal designs to projects involving several interchanges. She has worked extensively with local agencies and Caltrans.

Years In the Industry: 25
Years with Fehr and Peers in: 22

Education
Bachelor of Science, Civil Engineering, Summa Cum Laude, California Polytechnic State University, San Luis Obispo

Professional Licenses
- Civil Engineer, California (C62461)
- Civil Engineer, Washington (46221)
- Civil Engineer, Nevada (21812)
- Civil Engineer, Florida (85997)
- Traffic Engineer, California (TR2183)
- Professional Engineer, Oregon (90585)
- Professional Engineer, Colorado (50938)

Project Experience
- I-5/Louise Avenue Improvements (Lathrop, CA)
- Lathrop Road Grade Separation (Lathrop, CA)
- 11th Street/Grant Line Road Roundabout (San Joaquin County, CA)
- SR 99/Pelandale Avenue Interchange PS&E (Modesto, CA)
- SR99/Harney Lane Encroachment Permit (Lodi, CA)
- SR120/Union Rd DDI PS&E (Manteca, CA)
- Federal Downtown Controller Upgrade (Sacramento, CA)
- Downtown Infrastructure Improvements (Roseville, CA)

FEHR PEERS

HAMID ZOLFAGHARI, PE, SENIOR ASSOCIATE

Mr. Zolfaghari, PE, is an Intelligent Transportation Systems (ITS) and Electrical Engineering expert based in Fehr & Peers' Roseville office. Hamid brings over 30 years of transportation and electrical engineering experience, specializing in innovative technologies and communications systems. During his tenure at Caltrans, Hamid served as the Chief of the Electrical Systems Branch in the Headquarters Division of Traffic Operations and authored many of the manuals that are used throughout the state including the Roadway Lighting Manual and the Electrical Systems Design Guide. At Fehr & Peers, he now focuses on directing ITS projects that apply advanced hardware, software, and communications technology to transportation. He also contributes to our R&D investments and leads training in emerging technologies and innovative design.

Years In the Industry: 30
Years with Fehr and Peers in: 6

Education
Bachelor of Science, Electrical Engineering, California State University, Sacramento

Professional Licenses
- Electrical Engineer, California (E15636)

Project Experience
- CCTA SR 4 Bypass and Laurel Road Extension (Contra Costa County, CA)
- I-5/Richards Boulevard Interchange (Sacramento, CA)
- Signal Pre-emption System (Amador County, CA)
- Downtown Elk Grove Streetscape Project (City of Elk Grove, CA)

DANIEL P. ERIKSSON, AIA
PRINCIPAL

Mr. Eriksson is a Principal of Comstock Johnson Architects, Inc. who joined the firm in 1983. Mr. Eriksson has designed a broad variety of building projects, tenant improvements, and remodels. He has also focused on complex programming studies and projects for clients such as Yolo County, Sutter Health, Sacramento County and UC Davis.

Mr. Eriksson is involved in all phases of the architectural process. He has administered and executed the programming, design, construction documents, processing and construction phases of significant projects in the greater Sacramento Regional area. Daniel also manages the firm's quality control program.

Total Number Of Years In The Industry: 38+
Years With Comstock Johnson: 38

Education
Bachelor of Architecture, California Polytechnic State University, San Luis Obispo, California

International Program,
University of Copenhagen, Denmark

Professional Licenses
- CA License #C-19641
- NV License #5883
- OR License #6455
- NCARB #61787

Project Experience
- Yolo County Services Center 500 Jefferson Boulevard, West Sacramento-, CA
- Los Rios Community College District Facilities Offices and Shop 3753 Bradview Road, Sacramento, CA
- Yolo County Information Technology Facility 120 West Main Street, Woodland, CA
- Restroom and Concessions Building- City of West Sacramento, West Sacramento, CA
- Elk Grove City Hall 8400 Laguna Palms, Elk Grove, CA-

DAVID HELMS, AIA
PROJECT ARCHITECT

Mr. Helms has been a member of Comstock Johnson Architects, Inc. since 1988. He currently works in the capacity of Project Architect on a variety of projects. Those project types include large and small office buildings, laboratories, churches, multi-purpose buildings, and tenant improvements.

Mr. Helms is involved in all phases of the project including schematic design, design development, construction documents, construction administration, and project closeout.

Total Number Of Years In The Industry: 35
Years With Comstock Johnson: 33

Education
Bachelor of Arts, Emphasis: Environmental Design
San Diego State University

Professional Licenses
- CA License# C-28687

Project Experience
- Yolo County Landfill Office and HHW Facility 44090 County Road 28H, Woodland, CA
- San Joaquin County WorkNet 40 South Lincoln Street, Stockton, CA
- Yolo County Temporary Library 840 Jefferson Boulevard, West Sacramento, CA
- Solano Irrigation District Corporation Yard and Offices 1090 Piper Drive, Vacaville, CA
- Yolo County Services Center 500 Jefferson Boulevard, West Sacramento, CA

ENSBERG ENGINEERING E²

LUKE F. ENSBERG, PE SE

Mr. Ensberg, SE. My expertise includes a wide variety of materials and building types. For several years I designed multifamily residential wood framed apartment buildings, reinforced concrete residential buildings, structural steel museum and shopping mall buildings, tenant improvements using cold-formed steel, and a CMU auditorium at a reputable firm in Los Angeles.

Total Number Of Years In The Industry: 10
Years With Ensberg Engineering: 2017

Education
Master of Science in Civil Engineering, UCLA

Bachelor of Science in Civil Engineering, CSU Fullerton

Professional Licenses
- Civil Engineer, California (80628)
- Structural Engineer, California (6417)

Project Experience
- Grewal House – New two story wood-framed luxury home featuring irregular shear wall layout and steel support of theater room
- Hilton Garden Inn Facade Remodel – New exterior facade for wood-framed hotel in Davis
- Krueger House – Two story wood-framed home in Davis featuring modern style roof and posttensioned slab on grade
- Korba Barn – Hot-rolled steel metal building system barn
- American Buddhist Seminary – Two story wood seminary building with irregular roof diaphragms
- O Street Apartment Addition – Add second story to existing wood-framed apartment building

SCHEDULE OF FEES

TRC

E. SCHEDULE OF FEES

HOURLY RATES

Rates provided below include both non-prevailing and prevailing for convenience should the district have a need for services on a project subject to California Prevailing Wage Requirements.

STAFF NAME	PURSUIT ROLE/CLASSIFICATION	BILL RATE DYST	
		NON-PREVAILING	PREVAILING
Leaman, Lincoln	PIC & Contract/Project Manager	$262.79	$262.79
Rath, Dustin	TRC QA/Geotechnical Engineer	$210.23	$210.23
Wehling, Justin	CM/Lead Inspector	$185.98	$185.98
Tongthaworn, Kittijuk	Structural Engineer	$190.37	$190.37
Tsugawa, Matthew	Landscape Architect	$177.78	$177.78
Puerta-Falla, Guillermo	Special/Source Inspection Lead	$142.14	$180.95
Davis, Garrett	Inspector	$126.91	$160.16
De Bruyn, Benjamin	Electrical & Traffic Signal Inspector	$130.72	$189.61
McCary, Brandyn	Inspector	$121.89	$182.12
Palma, Edward	Inspector	$126.91	$186.41
Phillips, Jacob	Inspector	$126.91	$164.50
Pritchard, Sean	Inspector	$134.68	$188.80
Smith, Dwight	Electrical & Traffic Signal Inspector	$145.00	$203.00
Steverson, Jacqueline	Inspector	$137.07	$187.70

Labor Notes and Assumptions:

- If only straight-time rates are shown, overtime will be billed at a pro-rata adjusted rate.
- 3% Annual escalation, effective every July 1st beginning 1/1/22.
- Rates are based on DIR Prevailing Wage Determination 63-3-9-2020-2
  - Pre-determined Increase(s): $2.45/hr effective 7/1/21. TRC will adjust pay rates accordingly.

* Denotes employees/classifications that are subject to prevailing wage.

B. Professional On-Call Service's rate sheet - Primary Inspector

We propose the following rate sheet for inspector services through September 1st, 2021 through June 30th, 2022.

Item	Unit Cost
Primary Inspector	$70 per Hour

PRIMARY INSPECTOR RATE EXCLUDES: Printing, reprographics, postage and courier services. Testing equipment rental (if needed), laboratory services. Sub consultants, specialists or additional labor (if needed). Please see provided rate schedule for additional services.

C. Rate Schedule for Additional Services

*This rate schedule for BrightView Landscape Services is valid through June 30, 2022

Hourly Rates for Additional Services

Classification	Hourly Rate
Landscape Architect	$205.00
Senior Designer	$160.00
Horticulturist	$155.00
Arborist	$155.00
Designer	$125.00
Assistant Designer	$115.00
Draftsperson	$98.00
Administrative Assistant	$95.00
Irrigation auditor	$95.00
Irrigation specialist	$80.00

Reimbursable Expenses

Reimbursable Expenses are additional costs to the provided hourly rates:

Sub-Consultants	cost plus 15%
Printing and reprographics	cost plus 15%
Postage and courier service	cost plus 15%
Testing equipment rental	cost plus 15%
Laboratory testing	cost plus 15%

TWINING

Schedule of Fees 2020 - 2021

NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10026	Senior Principal Advisor/Consultant	$ 310.00
10001	Principal Engineer/Geologist	$ 210.00
10017	Metallurgical Engineer	$ 320.00
70000	Registered Geotechnical Engineer	$ 200.00
10010	Technical Advisor	$ 200.00
10011	Material Scientist, Welding/NDT Consultant	$ 210.00
70003	Registered Geologist/Certified Engineering Geologist	$ 195.00
10003	Senior Engineer/Geologist	$ 180.00
10009	Registered Civil Engineer	$ 175.00
60003	Roofing/Waterproofing Consultant	$ 200.00
10013	Project Engineer/Manager	$ 170.00
30000	Quality Control Manager	$ 160.00
10005	Senior Staff Engineer/Geologist	$ 155.00
10007	Staff Engineer/Geologist	$ 150.00
10015	Quality Control Administrator	$ 140.00
10019	Metallurgical Technician	$ 115.00
90001	CADD Operator/Draftsperson	$ 102.00
70107	Field Supervisor	$ 135.00
91030	Safety Supervisor	$ 135.00
20000	Laboratory Manager	$ 120.00
98000	Laboratory Technician	$ 95.00
90005	Expert Witness Testimony	$ 550.00
91010	Qualified SWPPP Developer	$ 155.00
91000	Qualified SWPPP Practitioner	$ 140.00
30001	Vibration Engineer	$ 180.00

Task Code	Field Inspection Personnel	Rate
10101	Concrete/Reinforced Steel Inspector	$ 105.00
10103	Prestressed/Post Tensioned Inspector	$ 105.00
10105	Concrete ICC Inspector	$ 105.00
10109	Drilled-In-Anchor Inspector	$ 105.00
10111	Gunite/Shotcrete Inspector	$ 105.00
10113	Masonry Inspector	$ 105.00
10201	Structural Steel/Welding Inspector	$ 105.00
10203	AWS Certified Welding Inspector	$ 110.00
10207	Fireproofing Inspector	$ 105.00
10501	Lead Inspector	$ 110.00
10115	Firestop Special Inspector - IFC Premier	$ 115.00
10117	Firestop Special Inspector - IQP	$ 125.00
75001	Asphalt Field and Plant Inspector/Technician	$ 105.00
70103	Pile Driving Inspector	$ 110.00
70101	Soils Technician	$ 105.00
10107	Concrete Quality Control (ACI/Caltrans Technician)	$ 105.00
10122	Wood Framing Inspector	$ 112.00
60001	Roofing/Waterproofing Inspector	$ 120.00
10515	Mechanical Inspector	$ 140.00
10519	Electrical Inspector	$ 140.00
10521	Plumbing Inspector	$ 140.00
10523	Building Inspector	$ 140.00
30002	Vibration Monitoring Technician	$ 110.00
50003	Field Engineering Technician	$ 105.00

Task Code	Shop Inspection Personnel	Rate
10301	Structural Steel Fabrication Inspector	$ 100.00
10309	Batch Plant Quality Control Technician/Inspector	$ 100.00
10325	Glue-Laminated Fabrication Inspector	Quotation
10328	Pre-Cast Concrete/Pipe Fabrication Inspector	$ 100.00

Task Code	Nondestructive Testing Personnel	Rate
10401	NDE Ultrasonic Testing Technician	$ 105.00
10403	NDE Magnetic Particle Testing Technician	$ 105.00
10405	NDE Dye Penetrant Testing Technician	$ 105.00
10305	Combination NDE Technician/Welding Inspector	$ 105.00
10409	Radiographic Testing (crew of 2)	$ 375.00
10020	NDE Engineer	$ 160.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted)	Rate
95318	Skidmore	$ 40.00
95309	Torque Wrench, Small	$ 15.00
95312	Torque Wrench, Large	$ 25.00
95315	Torque Multiplier	$ 40.00
95321	Air Meter	$ 20.00
95324	Brass Mold	$ 20.00
95343	Nuclear Gauge (Per Hour)	$ 10.00
95333	Pull Test Equipment	$ 60.00
95348	Concrete/Asphalt Coring Equipment	$ 600.00
95327	Pachometer	$ 55.00
95336	Floor Flatness (Dipstick)	$ 50.00
95330	Schmidt Hammer	$ 30.00
95341	Vapor Emission Test Kits	$ 30.00
95342	Relative Humidity Probe	$ 60.00
95339	UPV (Ultrasonic Pulse Velocity) Meter	$ 350.00
95351	Fireproofing Adhesion/Cohesion (Per Test)	$ 35.00
95300	A Scan Ultrasonic Equipment and Consumables	$ 75.00
95303	Magnetic Particle Equipment and Consumables	$ 40.00
95306	Liquid Penetrant Consumables	$ 35.00
95307	Phased Array Ultrasonic Equipment (Per Hour)	$ 60.00
95347	Ground Penetrating Radar	$ 300.00
95345	Impact Echo	$ 350.00
95362	Ultrasonic Tomography	$ 450.00
95349	Inertial Profiler (Per Hour)	Quotation
95357	Project Dedicated Vehicle	$ 110.00
95364	Roller Compacted Concrete Vibrating Hammer/Tampling Plate	$ 70.00
95367	Half-cell Potential Equipment Set	$ 350.00
95368	Concrete Electrical Resistivity Meter	$ 160.00
95369	Field Hardness (Steel)	$ 100.00
95370	Coating Thickness Gauge	$ 100.00
95373	Wood Curing Box (Per Box)	$ 500.00
95371	Temperature Control Curing Box (Per Month)	$ 450.00
95372	Temperature Matching Curing Box (Per Month)	$ 520.00

Task Code	Specimen Pick-Up	Rate
20102	Standard Sample: Concrete Cylinders (Each)	$ 25.00
20101	Standard Sample: Mortar/Grout Cubes and Cores, Fireproofing, Rebar, and Epoxy Prisms (Each)	$ 25.00
20103/ 20104	Oversize Sample: Masonry Prisms, Shotcrete Panels, Flexural Beams (Each)	$ 60.00
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 95.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 120.00

Task Code	Jobsite Trailer, Mobile or On-site Laboratory	Rate
95360	Mobile laboratory for rapid strength concrete (per shift not exceeding 12 hours) All others by quotation	$ 500.00

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" Cylinder: Compression Strength (ASTM C39)	$ 38.00
20202	4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 33.00
20203	Density of Structural Lightweight Concrete Equilibrium or Oven Dry Method (ASTM C567)	$ 80.00
20205	Core Compression including Trimming (ASTM C42)	$ 65.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00
20209	Splitting Tensile Strength (ASTM C496)	$ 90.00
20211	Modulus of Elasticity Test (ASTM C469)	$ 260.00
80003	Rapid Chloride Permeability Test: Cylinders or Cores (ASTM C1202)	$ 500.00
80006	Density, Absorption, and Voids in Hardened Concrete (ASTM C642)	$ 500.00

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Task Code	Concrete Tests (Field Made Specimens), Continued	Rate
40005	Flexural Toughness (ASTM C1609, Formerly ASTM C1018)	$ 800.00
40006	Double Punch Strength of Fiber Reinforced Concrete	$ 500.00
40009	Coefficient of Thermal Expansion of Concrete (CRD 39, AASHTO T336)	$ 550.00

Task Code	Concrete Specimen Preparation	Rate
20151	Sawing of Specimens (Each)	$ 35.00
20157	Coring of Specimens in Lab (Each)	$ 35.00
20159	Grinding of Concrete Below 6000 psi Strength (Each)	$ 50.00
20160	Grinding of Concrete 6000 psi Strength and Above (Each)	$ 75.00

Task Code	Laboratory Trial Batch: Concrete, Cement and Mortar	Rate
30217	Compression Test Cylinders Made and Tested in Laboratory (ASTM C192, C35)	$ 55.00
30219	6" x 6" x 18" Flexural Beams Made and Tested in Laboratory (ASTM C192, C78)	$ 95.00
30223	Splitting Tensile Strength Cylinders Made and Tested in Laboratory (ASTM C192, C496)	$ 110.00
30225	Modulus of Elasticity Test Cylinders Made and Tested in Laboratory (ASTM C192, C469)	$ 275.00
30227	Density of Structural Lightweight Concrete Made in the Laboratory, Equilibrium or Oven Dry Method (ASTM C567)	$ 100.00
30201	Laboratory Trial Batch (ASTM C192)	$ 500.00
30203	Laboratory Trial Batch: Packaged Dry Concrete Including Verification of Slump, Air Content, Plastic Unit Weight, Six Cylinders for Compressive Strength (ASTM C387 and C192)	$ 950.00
30205	Drying Shrinkage Up to 28 Days: Three 3" x 3" or 4" x 4" Bars, Five Readings up to 28 Dry Days (ASTM C157)	$ 490.00
30230	Additional Reading, Per Set of Three Bars	$ 45.00
30231	Storage over Ninety (90) Days, Per Set of Three Bars, Per Month	$ 30.00
30207	Setting Time Up to 7 Hours (ASTM C403)	$ 150.00
30209	Bleeding (ASTM C232)	$ 150.00
30229	Concrete Restrained Expansion (ASTM C878)	$ 550.00
30211	Mix, Make and Test Mortar or Grout Specimens for Compressive Strength: Set of 6 (ASTM C878)	$ 500.00
20263	Non-Shrink Grout: Height Change after Final Set (ASTM C1090)	$ 500.00
20265	Non-Shrink Grout: Height Change at Early Age (ASTM C827)	$ 800.00
30232	Cracking Resistance, Set of Three Rings, Laboratory Trial Batching, Test Until Cracking or up to 28 Days (ASTM 1581)	$ 5,000.00
30233	Evaluation of Pre-Packaged Masonry Mortars (ASTM C270)	$ 1,100.00
30234	Creep (ASTM C512) (One Age of Loading, 12 Months Duration of Testing)	$ 8,000.00

Task Code	Chemical Analysis and Petrographic Examination of Concrete	Rate
80123	Chemical Analysis for Acid Soluble Chlorides (ASTM C1152) (includes sample prep)	$ 250.00
80193	Chloride Diffusion Coefficient of Cementitious Mixtures by Bulk Diffusion (ASTM C1556)	$ 2,500.00
80129	Petrographic Examination of Hardened Concrete, Level II (ASTM 856) (Comprehensive)	
	Each, One Sample	$ 2,400.00
	Each, Two or More Samples)	$ 2,100.00

Task Code	Physical and Chemical Analysis of Cement	Rate
80195	Physical Testing and Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$ 1,200.00
80100	Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$ 650.00
80103	Physical Testing of Portland Cement per Standard Requirements (ASTM C150)	$ 650.00
80194	Physical Testing of Type K Cement, Mortar Expansion (ASTM C806)	$ 650.00
80106	Partial Analysis or Specific Physical Tests	Quotation
80110	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 6 months	$ 2,500.00
80111	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 12 months	$ 2,700.00

Task Code	Physical and Chemical Analysis of Fly Ash	Rate
80140	Chemical Analysis of Fly Ash per Standard Requirements (ASTM C618)	$ 650.00
80143	Physical Testing of Fly Ash per Standard Requirements (ASTM C618)	$ 650.00
80146	Partial Analysis or Specific Physical Tests	Quotation
80147	Chemical Analysis and Physical Testing of Fly Ash per Standard Requirements (ASTM C1618)	$ 1,200.00

Task Code	Physical Testing of Chemical Admixtures for Concrete	Rate
80196	Qualification of Admixture per ASTM C494	Quotation

Task Code	Soils and Aggregate Tests	Rate
30503	Abrasion: LA Rattler (ASTM C131)	$ 200.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 210.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM 204)	$ 160.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$ 550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$ 650.00
70344	Cement-Treated Soil/Base Mix Design: includes three trial cement contents with three unconfined compressive strength specimens per cement content	$ 3,500.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 175.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 200.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 225.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D3080)	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (ASTM D3744, CTM 229)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 170.00
75004	Fine Aggregate Angularity (ASTM C1252, CTM 234, AASHTO T304)	$ 190.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 240.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 210.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 190.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 195.00
70336	Maximum Index Density: Vibratory Table (ASTM D4253)	$ 345.00
70337	Moisture Content (ASTM D2216, CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 275.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 350.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	Quotation
80001	Potential Reactivity: Chemical Method (ASTM C289 - Discontinued Method)	$ 525.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 825.00
70391	Potential Reactivity: Mortar Bar Expansion Method, 28-Day Exposure (ASTM C1260)	$ 875.00
70398	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 12 month	$ 2,700.00
70399	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 24 month	$ 2,900.00

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Task Code	Soils and Aggregate Tests, Continued	Rate
70397	Potential Reactivity of Aggregate Combination, non-standard method; 14-Day Exposure, Mortar (after ASTM C1567)	$ 950.00
70392	Potential Reactivity of Aggregate Combination, non-standard method; 28-Day Exposure, Mortar (after ASTM C1567)	$ 1,000.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 440.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 490.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, D7928, CTM 203)	$ 250.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, D7928, CTM 203)	$ 240.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 150.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 120.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 240.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 235.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$ 150.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 190.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 125.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 125.00
30411	Lightweight Particles: Coarse, with Two Solutions (ASTM C123)	$ 410.00
30412	Lightweight Particles: Fine, with One Solution (ASTM C123)	$ 205.00

Task Code	Asphalt Concrete Tests	Rate
75031	HMA Mixing and Preparation	$ 125.00
75032	HMA Mixing and Preparation with Aggregate Treatment	$ 175.00
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (ASTM D2726, CTM 308C)	$ 55.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (ASTM D1188 and CTM 308A)	$ 80.00
75040	Emulsion Residue, Evaporation (ASTM D244)	$ 160.00
75024	Extraction: % Bitumen (ASTM D6307, CTM 382)	$ 160.00
75027	Extraction: % Bitumen and Gradation (ASTM D5444, D6307, CTM 202, 382)	$ 215.00
75028	Extraction: % Bitumen, Correction Factor (ASTM D6307, CTM 382)	$ 350.00
75030	Chemical Extraction: % Bitumen and Sieve Analysis (ASTM D2172 Method A or B, ASTM D5444)	$ 245.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (ASTM D1561, D1188, CTM 304, 308)	$ 215.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (ASTM D1560, D1561, CTM 304, 366)	$ 215.00
75048	Lab Tested Maximum Density: Marshall, 3 briquettes (ASTM D6926, D2726)	$ 210.00
75049	Lab Tested Maximum Density: Marshall 6" Specimen, 3 briquettes (ASTM D5581, D2726)	$ 215.00
75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, D2726)	$ 80.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D1188, D6925)	$ 90.00
75051	Maximum Theoretical Specific Gravity [RICE] (ASTM D2041, CTM 309)	$ 160.00
75066	Marshall Stability and Flow, Cored Sample, each (ASTM D6927)	$ 80.00
75069	Marshall Stability and Flow, Premixed, 3 briquettes (ASTM D6926, D6927)	$ 230.00
75106	Marshall Stability and Flow, Gyratory Compacted Specimen Pre-Mixed, 3 briquettes (ASTM D5581, D6925)	$ 230.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 230.00
75063	Moisture Content (CTM 370)	$ 85.00

Task Code	Asphalt Concrete Tests, Continued	Rate
75005	Wet Track Abrasion Test (ASTM D3910)	$ 165.00
75093	Hveem Mix Design (Excluding Aggregate Quality Tests)	$ 3,400.00
75096	Hveem Mix Design, with RAP (Excluding Aggregate Quality Tests, RAP Qualification)	$ 3,800.00
75099	Hveem Mix Design, with Lime (Excluding Aggregate Quality Tests)	$ 3,800.00
75094	Hveem Mix Design Caltrans Untreated Mix (Including Aggregate Quality Tests)	$ 4,650.00
75095	Hveem Mix Design Caltrans Lime Treated Mix (Including Aggregate Quality Tests)	$ 4,650.00
75084	Marshall Mix Design (Excluding Aggregate Quality Tests)	$ 3,400.00
75087	Marshall Mix Design with RAP (Excluding Aggregate Quality Tests)	$ 3,800.00
75090	Marshall Mix Design with Lime (Excluding Aggregate Quality Tests)	$ 3,800.00
75083	Open Grade Asphalt Concrete Mix Design (ASTM D7064, CTM 368)	$ 1,700.00
75109	Superpave Mix Design (Excluding Aggregate Quality Tests)	$ 4,900.00
75113	Superpave Mix Design, with RAP (Excluding Aggregate Quality Tests)	$ 6,500.00
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (ASTM D4867, AASHTO T283)	$ 1,000.00
75111	Hamburg Wheel Track Test, 20,000 passes, 4 briquettes (AASHTO T324)	$ 1,100.00
75039	Raveling Test of Cold Mixed Emulsified Asphalt (ASTM D7196)	$ 200.00
75067	Marshall Stability, wet set, 3 replicates (AASHTO T245)	$ 350.00
75068	Marshall Stability, dry set, 3 replicates (AASHTO T245)	$ 300.00
75070	Cold Recycled Asphalt Mix Design: 2 gradings each, 3 emulsion content (Caltrans LP-8)	$ 10,500.00
75114	Superpave Mix Design, with Rubber (Excluding Aggregate Quality Tests)	$ 6,600.00
75115	Superpave Mix Design, with Additives (Excluding Aggregate Quality Tests)	$ 5,790.00

Task Code	Brick Masonry Tests, ASTM C67	Rate
20301	Modulus of Rupture: Flexural	$ 90.00
20303	Compression Strength	$ 55.00
20305	Absorption: 5 Hour or 24 Hour	$ 60.00
20307	Absorption (Boil): 1, 2 or 5 Hours	$ 90.00
20309	Initial Rate of Absorption	$ 50.00
20311	Efflorescence	$ 70.00
20313	Cores: Compression	$ 65.00
20315	Shear Test on Brick Cores: 2 Faces	$ 90.00

Task Code	Concrete Block, ASTM C140	Rate
20321	Compression	$ 85.00
20323	Absorption/Moisture Content/Oven Dry Density	$ 85.00
20327	Linear Shrinkage (ASTM C426)	$ 225.00
20335	Web and Face Shell Measurements	$ 45.00
20329	Tension Test	$ 155.00
20331	Core Compression	$ 65.00
20333	Shear Test of Masonry Cores: 2 Faces	$ 90.00
20339	Efflorescence Tests	$ 70.00

Task Code	Masonry Prisms, ASTM C1314	Rate
20341	Compression Test: Composite Masonry Prisms Up To 8" x 16"	$ 190.00
20343	Compression Test: Composite Masonry Prisms Larger Than 8" x 16"	$ 250.00
20346	Prism Cord Modulus of Elasticity	$ 540.00
20347	Prism Cord Modulus of Elasticity with Transverse Strain (for double-wythe specimen)	$ 665.00

Task Code	Mortar and Grout	Rate
20351	Compression: 2" x 4" Mortar Cylinders (ASTM C780)	$ 55.00
20353	Compression: 3" x 3" x 6" Grout Prisms, Includes Trimming (ASTM C1019)	$ 40.00
20355	Compression: 2" Cubes (ASTM C109)	$ 55.00
20357	Compression: Cores (ASTM C42)	$ 65.00

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Task Code	Masonry Specimen Preparation	Rate
20155	Cutting of Cubes or Prisms	$ 65.00

Task Code	Fireproofing Tests	Rate
20401	Oven Dry Density (ASTM E605)	$ 70.00

Task Code	Gunite and Shotcrete Tests	Rate
20361	Core Compression Including Trimming (ASTM C42)	$ 65.00
20365	Compression: Cubes (Includes Saw Cutting)	$ 85.00

Task Code	Concrete Roof Fill: Gypsum, Vermiculite, Perlite, Lightweight Insulating Concrete, Etc.	Rate
20371	Compression Test (ASTM C495 and C472)	$ 55.00
20373	Air Dry Density (ASTM C472)	$ 40.00
20379	Oven Dry Density (ASTM C495)	$ 65.00

Task Code	Reinforcing Steel, ASTM A615, A706	Rate
20501	Tensile Test: # 11 or Smaller	$ 60.00
20503	Bend Test: # 11 or Smaller	$ 55.00
20504	Bend Test #14 or #18	$ 350.00
20505	Tensile Test: # 14	$ 240.00
20507	Tensile Test: # 18	$ 340.00

Task Code	Reinforcing Steel - Welded or Coupled Specimens	Rate
20521	Tensile Test: Welded/Coupled #11 and Smaller	$ 70.00
20523	Tensile Test: Welded/Coupled #14	$ 250.00
20525	Tensile Test: Welded/Coupled #18	$ 375.00
20529	Weld: Macroetch	$ 75.00
20531	Slippage Test - Caltrans (CTM 670)	$ 200.00
20532	Tensile Test: Welded Hoops #11 and Smaller	$ 145.00

Task Code	Metal and Steel Testing	Rate
20601	Tensile Strength: Up to 100K Pounds (Each)	$ 65.00
20603	Tensile Strength: Up to 200K Pounds (Each)	$ 75.00
20605	Tensile Strength: Up to 300K Pounds (Each)	$ 90.00
20607	Tensile Strength: Up to 400K Pounds (Each)	$ 140.00
20609	Tensile Strength: 400K to 600K Pounds (Each)	$ 350.00
20611	Tensile Strength: Stress-Strain Percent Offset	$ 175.00
20545	Weld: Macroetch	$ 75.00
20547	Weld: Fracture	$ 40.00
20615	Bend Test	$ 55.00
20617	Flattening Test	$ 70.00
20619	Hardness Test (ASTM E18)	$ 80.00
20630	Bolt: Axial Tensile Test (Up to 7/8" diameter)	$ 50.00
20631	Bolt: Wedge Tensile Test (Up to 7/8" diameter)	$ 65.00
20632	Bolt: Axial Tensile Test (Greater than 7/8" up to 1" diameter)	$ 70.00
20633	Bolt: Wedge Tensile Test (Greater than 7/8" up to 1" diameter)	$ 90.00
20634	Bolt: Axial Tensile Test (Greater than 1" diameter)	Quotation
20635	Bolt: Wedge Tensile Test (Greater than 1" diameter)	Quotation
20636	Bolt: Proof Load Test (Up to 7/8")	$ 75.00
20637	Bolt: Proof Load Test (Greater than 7/8" up to 1" diameter)	$ 95.00
20638	Bolt: Proof Load Test (Greater than 1")	Quotation
20639	Nut: Proof Load Test (Up to 7/8")	$ 55.00
20640	Nut: Proof Load Test (Greater than 7/8" up to 1" diameter)	$ 75.00
20641	Nut: Proof Load Test (Greater than 1")	Quotation

Task Code	Chemical Testing of Metal and Steel	Rate
80170	Steel Chemical Analysis	$ 160.00
80173	Weight of Galvanized Coating (ASTM A90)	$ 75.00
80176	Epoxy Coating Thickness	$ 80.00

Task Code	Machining and Preparation of Tensile and Bend Sample: Carbon Steel	Rate
20751	Machinist: Initial Preparation from Mock-up, Etc. (Per Hour)	$ 95.00
20753	Sawcut to Overall Width (Per 0.5" Thickness or Fraction Thereof)	$ 50.00 $ 55.00
20755	Machine to Test Configuration: Milled Specimens	$ 70.00
20757	Machine to Test Configuration: Turned Specimens (Per 0.5" Thickness or Fraction Thereof)	$ 135.00
20759	Prepare Subsize Specimens (Per 0.5" Thickness or Fraction Thereof)	$ 85.00

Task Code	Charpy Impact	Rate
20621	Charpy Impact Ambient Temperature	$ 90.00
20623	Charpy Impact Reduced Temperature	$ 110.00

Task Code	Machining of Charpy Samples: Carbon Steel	Rate
20780	Cutting and Milling (Per 0.5" or Fraction Thereof)	$ 80.00
20783	Final Machining to Sample Configuration	$ 90.00

Task Code	Prestressing Wires and Tendons, (ASTM A416)	Rate
20701	Stress-Strain Analysis: Wire or Strands (Including Chart and Percent Offset)	$ 180.00
20703	Tensile Test Only	$ 135.00
20705	Tendons	Quotation

Task Code	Polymer Matrix Composite Materials (Fiberwrap)	Rate
20706	Tensile Strength – Set of 5 Specimens/batch/ direction (ASTM D3039)	$ 1,350.00
20707	Tensile Strength – Additional Specimens (ASTM D3039)	$ 250.00
20708	Heating Chamber Time – Per 24 hr period	$ 95.00

Task Code	Calibration Services and Universal Machine Usage	Rate
20801	Calibration/Verification Services	Quotation
20803	Universal Test Machine Usage (Per Hour)	$ 350.00

Ceramic Tile Testing Division — Rate

The Ceramic Tile Institute of America (CTIOA) and Twining worked together to advance and develop technology designed to enhance the quality of materials and workmanship in the ceramic tile industry. A separate schedule of fees for these services is available upon request.

Cylic and Fatigue Testing Programs on Special Products/Parts	Quotation
Engineering and Technical supports/Design of Prototypes and Special Test Set-Up	Quotation
Fastener/Coupling Full Testing Program Per New Regulations: Tension, Tension/Bend, Shear, Double Shear, 8 Compressions	Quotation
Fiberglass/Composite Materials Field Testing Program (ASTM D1143 D1242, D2584, D4065, D4476, D4923, D7901, D7921, and D732)	Quotation
Field Testing of Structures and Structural Elements	Quotation
In-Place Shear Testing	Quotation
Materials and/or Product Evaluation Per Specifications	Quotation
Structural Dynamic Testing and Durability Analysis	Quotation

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General Conditions

NOTE: Field inspection work conditions are established by contract with Operating Engineers, Local 3.
NOTE: A minimum of 24 hours notice is required for testing and inspection services.
NOTE: For projects subject to a Project Labor Agreement (PLA), if terms/conditions of the PLA are more restrictive those terms/conditions will apply.
NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Administrative Fees
All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 5%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above will receive reports electronically. The administrative fee above will be increased by 1% if additional hard copies of reports are requested.

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)
2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection
8-Hour Minimum: Night Work

Regular Time
The first 8 hours worked Monday through Friday between 4:00 a.m. and 2:00 p.m.

Time and One-Half (All Types of Inspection)
All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 8 hours on Saturday.

Double Time (All Types of Inspection)
All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Friday and the first 8 hours Saturday, all day Sunday, and holidays. Holidays are New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, the day after Thanksgiving and Christmas Day.

Meal Period
When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period, one half hour at double time rate will be charged in addition to any applicable overtime for actual hours worked.

Shift Differential (Applies to Regularly Scheduled Shifts Only)
A $5.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period.

Travel Time and Mileage
For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians.
Other than small tools, whenever project related equipment is required to be transported to and from the project site, time and mileage for inspectors and field technicians will be billed on a portal to portal basis. For all projects, $0.70 per mile rate and applicable travel time will be charged portal to portal for engineers, consultants, supervisors, and laboratory technicians from the laboratory to the project site and return.

For work locations located 50 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Weekend Sample Pick-Ups
In order to be in strict conformance with testing standards, it may be required that weekend pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up on weekend in order to be in conformance with ASTM C31 requiring specimens to be moved to their final curing location within 48 hours of casting.) Applicable charges for weekend work will apply when this is required. Should these charges not be authorized, Twining will not be liable for any negative consequences.

Reimbursable Expenses
Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 20% per processed invoice, unless provided by client.

Project Specific Documents
Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a "for fee" service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities
Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements are provided by others. In addition, prices quoted assume that work/desk space for inspection staff are provided by others. Additional costs will apply should Twining be required to provide such facilities.

Subsistence
Subsistence on remote jobs will be charged per quotation.

Laboratory Testing Hours
Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before 5:30 a.m. or after 4:00 p.m. on weekdays, an additional hourly charge with a minimum of one hour will be applied for the laboratory technician. 1.5 x regular test rate will be charged for rush testing.

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

TWINING

General Conditions, continued

Limit of Liability
Client agrees to limit Twining's aggregate liability to all entities for alleged or actual errors and omissions in the performance of its professional services under this agreement to $50,000.00 or the fees actually paid to Twining, whichever amount is greater. Higher limits may be available by quotation.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $150.00/month. Fee applies to every month that certified payroll must be submitted regardless of whether or not services were provided for any given month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically require approval by the engineer or architect of record. This process can take several weeks or just a day, depending on the number and complexity of the issues. Cost for final reports will be billed hourly.

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and the maximum legal finance charge will be added to the unpaid balance.

A 3% fee will be applied for payments processed by credit card.

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are correct and valid. Twining reserves the right to terminate its services to a customer without notice if all invoices are not current. Upon such termination of services, the entire amount accrued for all services performed shall immediately become due and payable. Customer waives any and all claims against Twining, its subsidiaries, affiliates, servants and agents for termination of work on account of these terms.

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorney's fees and all other related expenses in such litigation. Additionally, in the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by arbitration, that same process shall determine the prevailing party.

Hold Specimens
All held specimens submitted by the client are charged at the same applicable test rate whether tested or not.

Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are made.

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle because of size or weight.

Elevated Work Platforms
In the event an elevated work platform is required to safely complete our inspections, the client must provide safe access, including a trained and certified operator, to Twining inspection and testing personnel.

FEHR PEERS

2020-2021

(July 2020 through June 2021)

Hourly Billing Rates

Classification	Hourly Rate
Principal	$180.00 - $350.00
Senior Associate	$185.00 - $340.00
Associate	$170.00 - $245.00
Senior Engineer/Planner	$135.00 - $215.00
Engineer/Planner	$115.00 - $165.00
Senior Engineering Technician	$145.00 - $195.00
Senior Project Accountant	$160.00 - $165.00
Senior Project Coordinator	$120.00 - $165.00
Project Coordinator	$85.00 - $150.00
Technician	$115.00 - $160.00
Intern	$90.00 - $115.00

- *Other Direct Costs / Reimbursable expenses are invoiced at cost plus 10% for handling.*
- *Personal auto mileage is reimbursed at the then current IRS approved rate (58 cents per mile as of Jan 2020).*
- *Voice & Data Communications (Telephone, fax, computer, e-mail, etc.) are invoiced at cost as a percentage of project labor.*

ENSBERG ENGINEERING E²

2402 Temple Drive
Davis, CA 95618
(530) 574-0738
Email: luke@ensbergengineering.com
www.ensbergengineering.com

May 6, 2021

Ensberg Engineering Firm Profile

Ensberg Engineering is a solo practice structural engineering firm owned by Luke Ensberg, SE. My expertise includes a wide variety of materials and building types. For several years I designed multifamily residential wood framed apartment buildings, reinforced concrete residential buildings, structural steel museum and shopping mall buildings, tenant improvements using cold-formed steel, and a CMU auditorium at a reputable firm in Los Angeles. I then moved to Davis and worked at a structural engineering firm specializing in single and multifamily wood residential design. Since starting my own firm in September of 2017, my work has focused on single family residential new homes and remodels. I have also designed foundations for industrial equipment, a new two story wood framed Buddhist seminary, steel shade structures for Enterprise Rent-a-Car, and a hot-rolled steel barn. Also, I have performed seismic evaluations and retrofits of various other types of buildings including apartment buildings.

Labor hourly rates:

Project Structural Engineer – $120 per hour
Drafting – $50 per hour

Sincerely,

Luke Ensberg, PE, SE
Principal, Ensberg Engineering

Comstock Johnson
ARCHITECTS INC.

Principals:

Daniel P. Eriksson
Architect

Kevin L. Wilcox
Architect

FEE SCHEDULE

Hourly Rates:

Principal	$180.00
Sr. Architect	$165.00
Project Architect	$150.00
Project Manager	$135.00
Architect	$125.00
Project Coordinator	$120.00
Interior Designer/Space Planner	$105.00
Job Captain	$100.00
Designer II	$85.00
Designer I	$70.00
Intern	$50.00
Administration/Clerical	$60.00

Reimbursables:

Consultants, Reimbursables (i.e. prints, copies, renderings, color copies, etc.), mileage and permit processing will be billed at cost, plus fifteen percent (15%) under Task .20.

V:\21096\WP\Promo\CJA Fee Schedule #58 on letterhead.doc

10520 Armstrong Avenue · Mather, CA 95655 · Phone 916.362.6303 · Fax 916.362.5841

COMMENTS TO AGREEMENT

TRC

EXHIBIT A - COMMENTS TO AGREEMENT

TRC Engineers has reviewed the Mountain House Community Service District's standard contract agreement included in the Request for Qualifications. While TRC agrees with the vast majority of the terms and conditions in the sample contract, if TRC is a successful proposer, we respectfully request the opportunity to discuss with the Mountain House CSD the addition of clarifying language and/or slight modifications to the following clauses/exhibits:

5. Standard of Performance:

Delete: CONTRACTOR shall perform all Work in a first-class manner in conformance with the standards of quality normally observed by a person practicing in CONTRACTOR's profession.

Replace with: CONTRACTOR shall perform its Work in a manner consistent with the degree of professional skill and care exercised by similar professionals on projects of similar scope, nature and complexity in line with industry standards and practice and in accordance with generally accepted engineering, environmental, and/or construction practices in effect at the time the Services are rendered.

9. Contractor's Status:

Delete: ...employee of the MHCSD. CONTRACTOR shall perform the CONTRACTOR's work in accordance with currently approved methods and standards of practice in the CONTRACTOR's professional specialty. A copy of CONTRACTOR's current...

Replace with: ...employee of the **MHCSD. A copy** of CONTRACTOR's current...

10. Assignments:

Delete: Inasmuch as this Agreement is intended to secure the specialized services of the CONTRACTOR, CONTRACTOR may not assign, transfer, delegate or subcontract their obligation herein without the prior written consent of MHCSD.

Replace with: Inasmuch as this Agreement is intended to secure the specialized services of the CONTRACTOR, CONTRACTOR may not assign, transfer, delegate or subcontract their obligation herein without the prior written consent of MHCSD **which such consent shall not be unreasonably withheld.**

12. Compliance:

Delete: Furthermore, CONTRACTOR shall comply with all laws applicable to wages and hours of employment, occupational safety, and to fire safety, health and sanitation.

Replace with: Furthermore, CONTRACTOR shall comply with all Federal, State and local laws applicable to wages and hours of employment, occupational safety, and to fire safety, health and sanitation.

13. Indemnification, Hold Harmless and Defense:

Delete: Paragraph 1: ...damages, penalties, judgments, awards, decrees, costs, expenses, attorneys' fees, losses or liabilities...

Paragraph 2: ...awards, decrees, costs, expenses, attorneys' fees, losses or liabilities,...

Replace With: Paragraph 1: ...damages, penalties, judgments, awards, decrees, costs, expenses, **reasonable** attorneys' fees, losses or liabilities...

Paragraph 2: ...awards, decrees, costs, expenses, **reasonable** attorneys' fees, losses or liabilities,...

Insert: as paragraph number 3. Notwithstanding anything to the contrary in this Agreement, CONTRACTOR and MHCSD waive any and all claims against each other for incidental, consequential, special, multiple, and punitive damages arising out of or relating to this Agreement. This waiver includes, but is not limited to, loss of profit, loss of business, loss of income, loss of reputation or any other consequential damage that either Party may incur from any cause of action including negligence, strict liability, contract breach, and strict or implied breach of warranty.

20. Force Majeure:

Delete: ...attributable to Acts of God, war, strikes, riots, lockouts, accidents, rules or regulations of...

Replace With: ...attributable to Acts of God, war, strikes, riots, lockouts, accidents, **epidemics, pandemics**, rules or regulations of...

22. Documents:

Delete: All drawings, specifications, documents and other memoranda or writings relating to the work and services hereunder, shall remain or become the property of the MHCSD whether executed by or for the CONTRACTOR for MHCSD, or otherwise by or for the CONTRACTOR, or by or for a subcontractor operating under the CONTRACTOR'S supervision, or direction, and all such documents and copies thereof shall be returned or transmitted to MHCSD forthwith upon termination or completion of the work under this Agreement.

Replace With: All drawings, specifications, documents and other memoranda or writings relating to the work and services hereunder **("Work Product")**, shall remain or become the property of the MHCSD **upon payment therefor** whether executed by or for the CONTRACTOR for MHCSD, or otherwise by or for the CONTRACTOR, or by or for a subcontractor operating under the CONTRACTOR'S supervision, or direction, and all such documents and copies thereof shall be returned or transmitted to MHCSD forthwith upon termination or completion of the work under this Agreement. **However, this ownership shall not include any ownership interest in CONTRACTOR'S preexisting information or intellectual property. Furthermore, the Parties agree that the Work Product, although the property of MHCSD, are prepared for a specific project and are not intended nor represented by CONTRACTOR to be suitable for re-use for any other project. Any reuse without written verification or adaptation by CONTRACTOR for the specific purpose intended will be at MHCSD'S sole risk and without liability or legal exposure to CONTRACTOR**.

27. Non-Liability of Officials, Employees and Agents:

Delete: No officer, official, employee or agent of District shall be personally liable to CONTRACTOR in the event of any default or breach by District or for any amount which may become due to CONTRACTOR pursuant to this Agreement.

Replace With: No officer, official, employee or agent of **either Party** shall be personally liable to **the other Party** in the event of any default or breach or for any amount which may become due pursuant to this Agreement.

TRC

183 D'ARCY PARKWAY
LATHROP, CA 95207
T: 209.858.5500

EXHIBIT B
INSURANCE REQUIREMENTS

a) Required Coverage. Consultant shall maintain all required insurance listed herein for the duration of this Agreement.

TYPE OF INSURANCE	MINIMUM LIMITS
Commercial General Liability Premises Liability; Products and Completed Operations; Contractual Liability; Personal Injury and Advertising Liability	$1,000,000 per occurrence; Bodily Injury and Property Damage $2,000,00 in the aggregate; Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition) covering comprehensive General Liability on an "occurrence" basis
Commercial or Business Automobile Liability All owned vehicles, hired or leased vehicles, non-owned, borrowed and permissive uses. Personal Automobile Liability is acceptable for individual contractors with no transportation or hauling related activities	$1,000,000 per occurrence; Any Auto; Bodily Injury and Property Damage. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (most recent edition), Code 1 (any auto). No endorsement shall be attached limiting the coverage.
Workers' Compensation (WC) and Employers Liability (EL) Required for all contractors with employees	WC: Statutory Limits EL: $100,000 per accident for bodily injury or disease. Consultant may rely on a self-insurance program to meet those requirements, but only if the program of self-insurance complies fully with the provisions of the California Labor Code. The insurer shall waive all rights of subrogation against MHCSD and its officers, officials, employees, and volunteers for loss arising from work performed under this Agreement
Professional Liability/Errors & Omissions Includes endorsements of contractual liability	$1,000,000 per occurrence $2,000,000 policy aggregate; Any deductible or self-insured retention shall not exceed $150,000 per claim

b) Additional requirements. Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:

i) All required insurance shall be maintained during the entire term of the Agreement with the following exception: Insurance policies and coverage(s) written on a claims-made basis shall be maintained during the entire term of the Agreement and until three (3) years following termination and acceptance of all work provided under the Agreement,

with the retroactive date of said insurance (as may be applicable) concurrent with the commencement of activities pursuant to this Agreement

ii) All insurance required above with the exception of Professional Liability, Personal Automobile Liability, Workers' Compensation and Employers Liability, shall be endorsed to name as additional insured: Mountain House Community Services District, its Board of Directors, and all MHCSD officers, agents, employees, volunteers and representatives.

iii) For any claims related to this Agreement or the work hereunder, the Consultant's insurance covered shall be primary insurance as respects MHCSD, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by MHCSD, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

iv) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after 30 days' prior written notice has been provided to MHCSD.

v) Certificates of Insurance: Before commencing operations under this Agreement, Consultant shall provide Certificate(s) of Insurance and applicable insurance endorsements, in form and satisfactory to MHCSD, evidencing that all required insurance coverage is in effect. MHCSD reserves the rights to require the Consultant to provide complete, certified copies of all required insurance policies.

vi) Subcontractors**:** Consultant shall include all subcontractors as an insured (covered party) under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

vii) Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:

1) The retroactive date of the policy must be shown and must be before the date of the Agreement.

2) Insurance must be maintained and evidence of insurance must be provided for at least five years after completion of the Agreement or the work, so long as commercially available at reasonable rates.

3) If coverage is canceled or not renewed and it is not replaced with another claims-made policy form with a retroactive date that precedes the date of this Agreement, Consultant must purchase an extended period coverage for a minimum of three (3) years after completion of work under this Agreement.

4) A copy of the claim reporting requirements must be submitted to MHCSD for review prior to the commencement of any work under this Agreement.

c) All Policies Requirements.

i) Acceptability of insurers. All insurance required by this section is to be placed with insurers with a Bests' rating of no less than A:VII. Insurance shall be maintained through an insurer with a minimum A.M. Best Rating of A- or better, with deductible amounts acceptable to MHCSD. Acceptance of Consultant's insurance by MHCSD shall not relieve or decrease the liability of Consultant hereunder. Any deductible or self-insured retention amount or other similar obligation under the policies shall be the sole responsibility of the Consultant.

ii) Deductibles and Self-Insured Retentions. Consultant shall disclose to and obtain the written approval of MHCSD for the self-insured retentions and deductibles before beginning any of the services or work called for by any term of this Agreement. At the option of MHCSD, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects MHCSD, its officers, employees, and volunteers; or the Consultant shall provide a financial guarantee satisfactory to MHCSD guaranteeing payment of losses and related investigations, claim administration and defense expenses.

iii) Wasting Policies. No policy required by this Section 4 shall include a "wasting" policy limit (i.e. limit that is eroded by the cost of defense).

iv) Waiver of Subrogation. Consultant hereby agrees to waive subrogation which any insurer or contractor may require from vendor by virtue of the payment of any loss. Consultant agrees to obtain any endorsements that may be necessary to affect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the entity for all work performed by the consultant, its employees, agents, and subcontractors.

d) Remedies. In addition to any other remedies MHCSD may have if Consultant fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, MHCSD may, at its sole option exercise any of the following remedies, which are alternatives to other remedies MHCSD may have and are not the exclusive remedy for Consultant's breach:

i) Obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Agreement;

ii) Order Consultant to stop work under this Agreement or withhold any payment that becomes due to Consultant hereunder, or both stop work and withhold any payment, until Consultant demonstrates compliance with the requirements hereof; and/or

iii) Terminate this Agreement.