



STATEMENT OF QUALIFICATIONS

Civil – Geotechnical – Material Testing

TRINITY ENGINEERING LABORATORIES, INC.
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TO THE READER...

This document presents a general overview of the qualifications and experience of Trinity Engineering Laboratories, Inc. We offer a full complement of engineering and material testing services. Our staff is comprised of professional engineers and technicians with extensive and varied experience. We would welcome the opportunity to discuss your project plans.

Included is an abbreviated listing of the project types and specific capabilities that provide a generalized scope of the services offered by the firm. We also maintain a working relationship with several additional consultants to provide a broader scope of services and allow our clients to enjoy the benefits of one primary project consultant.

If we could be of any assistance in your project plans, please contact of the individuals listed below.

Mark Horn – Chief Civil Engineer/Vice President

Matthew Horn – Project Manager/Estimator

Joshua Guilmette – Training/Senior Field Technician

Christen Guilmette – HR/Payroll/Office Manager

Whitney Horn – Business Development Manager

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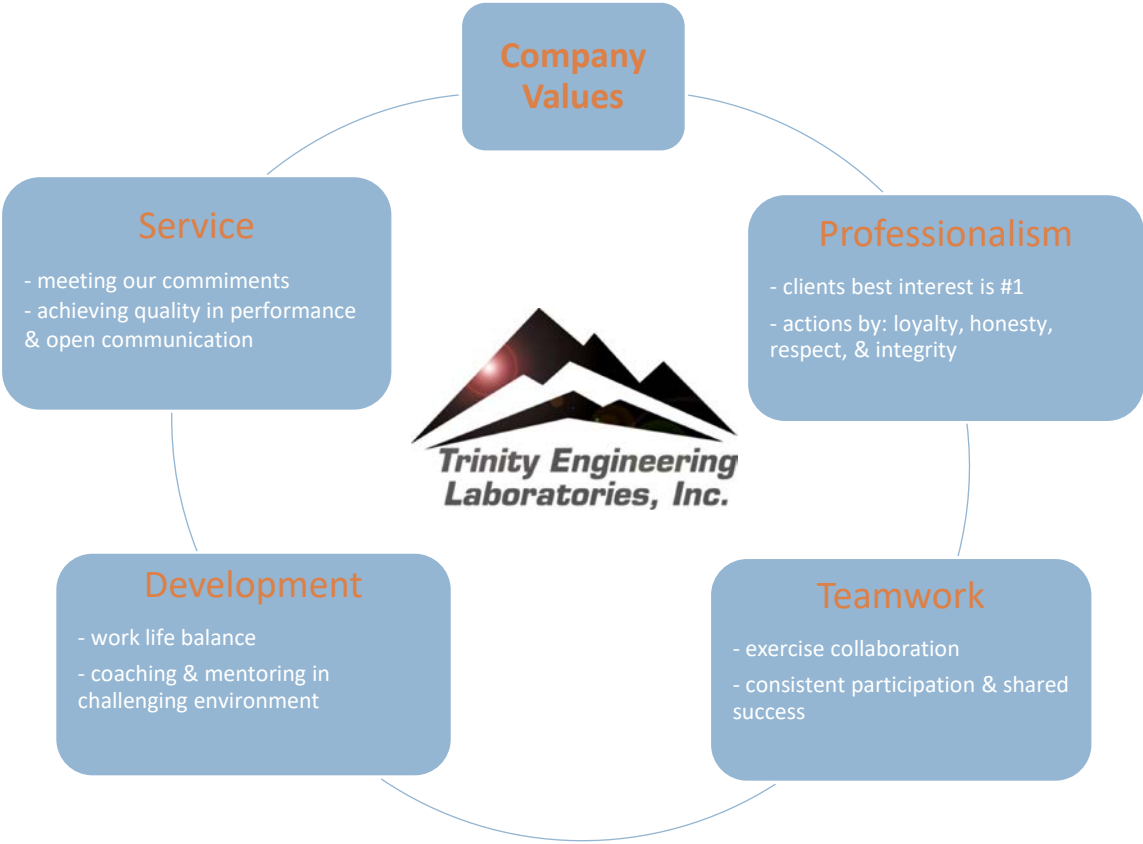
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Vision Statement: “Trinity Engineering Laboratories is the definition of QUALITY.”



1. CORPORATE INTRODUCTION

Trinity Engineering Laboratories, Inc. is a multi-discipline professional services firm located in Fresno, CA. The company employs individuals of various technical and professional backgrounds. Trinity's roots can be traced from February of 2009. Through the years of family operated ownership succession, it has evolved into a full service engineering company offering professional services throughout the state of California, with potential growth nationwide.

The primary services offered include: Civil and Geotechnical Engineering Services. These activities are supported by in-house sampling, materials testing, and design capabilities.

Typical clients include: commercial and industrial business developers, contractors, cities, counties, government institutions, public works and private utilities, and natural resource companies. Trinity frequently provides technical services to other engineering and architectural service companies.

Our geographic service area is essentially unlimited with the use of mobile labs, but historically has been throughout the state of California, from border to border.

The multi-discipline activities of Trinity Engineering Laboratories, Inc. provide a significant advantage in project development from inception through final construction. An integrated approach of site planning, analysis and design, geotechnical analysis, civil design, and construction services enhances successful and cost effective project development.



2. PROFILE OF PROFESSIONAL SERVICES

2.1 CIVIL ENGINEERING

Trinity Engineering Laboratories, Inc. provides civil engineering as it relates to a wide variety of project developments. We can provide complete services from the initial data acquisition sit surveys with total station data collectors, through final design integrated into AutoCAD mapping and design systems. The system flexibility allows integration with architectural design systems, and other leading engineering applications.

Specific civil engineering services provided by Trinity include the following:

- *Site planning, analysis and design*
- *Street and roadway design*
- *Drainage evaluation and design*
- *Bridge and box culvert design*
- *Site grading and earthwork*
- *Mining system design*
- *Industrial process design*
- *Environmental design*



2.2 GEOTECHNICAL ENGINEERING

Geotechnical services are provided for a multitude of projects both in support of our internal civil engineering projects, and external consulting services. Our work is complimented by providing drilling services and a complete materials testing laboratory in-house.

Specific geotechnical engineering services provided by Trinity include the following:

- *Building and structural foundation evaluation*
- *Groundwater analysis*
- *Earth structure design and analysis*
- *Geological hazard analysis*
- *Geologic resource evaluations: drilling and coring*
- *Soil resistivity surveys*
- *Mining process design*

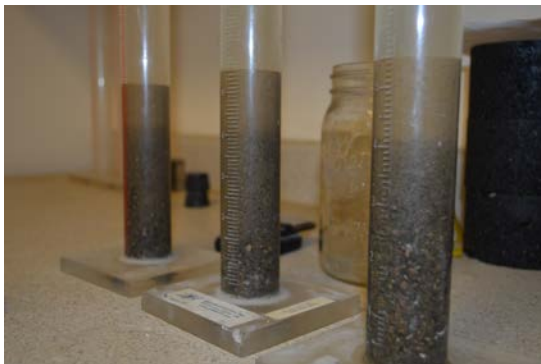


2.3 MATERIALS TESTING/CONSTRUCTION QUALITY CONTROL

Trinity Engineering Laboratories, Inc. maintains a complete materials testing laboratory in-house. The services support the testing requirements of geologic materials obtained during our drilling operations for geotechnical and geologic assessments. In addition, the laboratory services support our work for construction materials and quality assurance activities in the construction industry. Field quality control operations are supported by several technicians and equipment including nuclear density gauges, and concrete and asphalt testing apparatus. Our project experience has ranged in complexity and size, and throughout California. We are in accordance with International Building Code (IBC) and California Building Code (CBC) Section 1704A.1.1.

Specific materials testing and construction quality control services provided by Trinity include the following:

- *Soils and geological materials properties analysis*
- *Aggregate properties analysis*
- *Asphalt materials testing and mix design*
- *Concrete materials testing and mix design*
- *Concrete cylinder compression tests and flex beams*
- *Statistical analysis of concrete testing data*
- *Field testing of sprayed fire-resistive materials*
- *Field soil and rock rill compaction testing*
- *Field concrete testing*
- *Concrete core sampling*
- *Field masonry testing*
- *Field asphalt testing*
- *Construction observation and documentation*




3. REPRESENTATIVE PROJECTS BY YEAR




2009 & 2010

- Project: Fresno County Overlay
- Project: HWY 140 Teichert
- Mix Design Development




2011

- Project: Madera Overlay
- Agee Construction




2012

- Project: HWY 43 Emmett's Excavation
- Road 209 Madera, CA
- PRC, CIR, QC/QA



2013

- Project: HWY 180 Bridge/Earthwork
- Paige Avenue Tulare, CA
- FDR Paving



2014

- Project: Solar Farms
- HWY 99, HWY 121, HWY 43
- Earthwork/trenches/concrete/geotech



2015

- Project: Parrot Ferry Road
- Bonded Wearing Course
- FDR Paving



2016

- Project: Airports - Livermore, Columbia, Modesto
- Quality Assurance & District 4 testing
- ACI certifications

4. PROFESSIONAL & TECHNICAL STAFF INFORMATION

Trinity Laboratories, Inc. provides personnel and management services at many levels for your project needs. Our experienced staff of registered professional engineers include:

- Civil Engineers
- Geological Engineers
- Certified Technicians
- Accounting and Administrative Support Staff

The services of Trinity are divided into two major areas of Civil Engineering and Certified Technicians although significant overlap of duties and abilities occur, as we purposely tend to limit our internal hierarchy. We consider it important to allocate personnel to fit project needs rather than our own internal structures.

In addition to the many professional; and technical registrations held by our staff, many additional hours of training have been complete in various areas including OSHA 40-hour training for potentially hazardous work sites.

We have received the following local awards: voted the *Best of Clovis 2013, 2014, 2015: Testing and Consulting Engineers*. Trinity Engineering Laboratories has the ability to:

- keep overhead costs down to save clients' money.
- scale up immediately for large projects.
- select the most appropriate specialists for the job.



4.1 MARK HORN, P.E. VICE PRESIDENT & CHIEF ENGINEER

POSITION IN FIRM:

Mark Horn is the Vice President of Trinity Engineering Laboratories, Inc. In addition, Mr. Horn is the principle engineer, business manager, and founder in February of 2009. He has previous experience with Granite Construction as the GARCO Regional Engineer Manager for 12 years (1996-2008) and was the Senior Tower Engineer with Union Oil for 7 years. He was the Material Laboratory Director for Krazan and Associates for 6 years (1990-1996). Mark's expertise includes: forensic studies, optimization, risk management, quality control, quality assurance, heavy construction procedures and specification development. He spearheads cost save ideas for materials, minimizing repeat work, and recycling techniques.

EDUCATION & TRAINING:

Bachelor of Science: (B.S.) Civil Engineering, 1990-1995, California State University, Fresno

Electronic and Electrical Engineering, 1978-1981, California State University, Long Beach

PROFESSIONAL RECOGNITION & ACHIEVEMENTS:

Registered Professional Engineer, State of California

REPRESENTATIVE CAREER EXPERIENCE & PROJECTS

Representative project experience examples for Expert Witness/Claim/Litigation are listed below:

- 1994: Mojave Airport - Asphalt Concrete Compliances - *Claim*
- 1997: Hwy 138 – Caltrans - Asphalt Material Compliances - *Claim*
- 1998: Ana Verde Development - Asphalt Material Compliances - *Mediation*
- 1998: Caltrans – Concrete Aggregates - *Claim/Litigation*
- 1999: Hwy 129 – Caltrans - Asphalt Concrete Compliances - *Claim*
- 2000: Hwy 880 – Caltrans - Mix Designs - *Claim*
- 2001: Santa Cruz Mountains - Private Development - Slope Failures - *Claim*
- 2002: City of Bakersfield - PG Grades – *Specifications*
- 2002 - 2004: Miramar Resort - Santa Barbara - Material Compliances - *Mediation/Expert Witness*
- 2003: Edward Air Force Base – AMCP - Soil Cement - *Claim*
- 2003 - 2006: Caltrans - AGC specification Development
- 2009: ct 3421- Bakersfield - Binder Specifications - *Expert Review/Testing*
- 2009: Blackstone Paving vs City of Bakersfield Schools – Paving - *Mediation*
- 2010: Hwy 101 - Moisture Damages - Caltrans – *Claim*
- 2011: Hwy 245 - Teichert Smoothness and Specifications - *Claim*
- 2012: Mitch Brown vs City of Porterville - Pavement failures - *Mediation*
- 2010 - 2013: Menefee vs County of Fresno - *Mediation/Litigation*
- 2014: ISS vs Bowman Asphalt & VSSI vs Northwest Paving – *Expert Witness*
- 2015: VSSI vs Chester Bross & Caltrans vs Papich (ongoing) – *Litigation/Specification Expert*
- 2016: VSSI vs Chester Bross HWY 99, HWY 128, HWY 86 - *Expert Witness/Litigation*
- 2016: Menefee vs Vulcan Materials - *Material and Specifications*

5 PROFESSIONAL & TRADE AFFILIATIONS

- ASTM Technical Group: Paving and Aggregates/Soil
- RSO trained and certified
- Committee memberships for the following:
 - NCAPA
 - Anti-stripping lime applications
 - AGC California
 - Caltrans - QC/QA specifications

6 CURRENT & PAST CLIENT LIST

- Vulcan Materials Company
- NV5
- Menefee Construction, Inc.
- Jaxon Enterprises
- Quad Knopf
- Teichert Construction
- Mitch Brown Construction
- Telfer Company
- BSK & Associates
- Yamabe & Horn Engineering Inc.
- Porterville Asphalt
- Granite Construction Company, Inc.
- Pavement Recycling
- VSSI
- Blackstone Asphalt
- Western Emulsions
- George Reed
- APART
- MCK Services
- Sunrising Grading & Paving
- Agee Construction Corporation
- Tom Mayo Construction
- Emmett's Excavation Inc.
- Lee's Paving, Inc.
- Lee's Concrete Materials Inc.
- BMY Construction Inc.
- R.J. Berry Construction
- Don Berry
- Calaveras Materials Inc.
- South Valley Materials
- Porterville Rock & Recycle
- County of Tulare
- Yolo County
- Kern County
- City of Clovis
- Blaire, Church, & Flynn Consulting Engineers
- 150+ Caltrans projects (over 3 years)
- City of Bakersfield
- Department of Transportation, California
- City of Hanford
- Federal Aviation Administration
- City of Lindsay
- Federal Highway Administration
- City of Reedley
- American Paving Company
- Avison Construction
- Bowman Asphalt
- City of Visalia
- CalPortland Construction
- City of Reedley
- County of Kern
- Papich Construction
- Central Valley Testing
- Woodside Homes
- County of Kings
- Jim Crawford Construction
- Peterson Chase
- County of Tulare
- Synergy Project Management
- Porterville Pipe
- County of Tuolumne
- Taylor Backhoe Services
- Lehigh Hansen
- FAA
- Asphalt Design
- RMA Group
- Sierra Pacific Materials
- Chester Bross Construction
- Mendoza & Associates
- Griffith Construction
- City of Chowchilla
- Mac Engineering
- CSW Contractors
- Seal Rite
- Argonaut Constructors
- Arcadis
- Pavement Recycling Company
- Cemex
- Durham Soil Company
- Santa Fe Aggregates
- Metro Electrical Company
- Hansen Material