

**STATEMENT OF QUALIFICATIONS**  
**GEOTECHNICAL ENGINEERING**  
**EARTHWORK TESTING**  
**MATERIALS ENGINEERING & TESTING**  
**SPECIAL INSPECTIONS**



***MPE*** **MID PACIFIC**  
**ENGINEERING, INC.**



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*MID PACIFIC ENGINEERING, INC.*

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GEOTECHNICAL ENGINEERING | EARTHWORK TESTING | MATERIALS ENGINEERING AND TESTING | SPECIAL INSPECTIONS

## STATEMENT OF QUALIFICATIONS

Mid Pacific Engineering (MPE) is a professional consulting firm dedicated to providing high quality services to private and public clients throughout Northern California. MPE's staff consists of a team of professionals and technical specialists recognized for their expertise in the fields of Geotechnical Engineering, Earthwork Construction Testing, and Construction Materials Engineering and Testing, and Special Inspections.

Formed in 2009, the firm's strength was founded on the extensive career experience of our six founding partners with all types of projects over the past 20+ years. Building from this foundation, we have added highly qualified engineering and technical staff, with some of the most experienced and well-respected staff in Northern California. We encourage you to review our resumes and experience.

Our philosophy in forming MPE has been to develop strong working relationships by providing high quality, personalized and timely services. It has been our experience that building a strong working relationship means being flexible and responsive to client's needs. MPE is focused on providing prompt, high quality services with personalized attention in a cost-effective manner.

MPE is fully accredited by the Cement and Concrete Reference Laboratory (CCRL) and AASHTO Materials Reference Laboratory (AMRL) and participates in their proficiency sample program (PSP). MPE has been accepted by the California Division of State Architect (DSA) into the Laboratory Evaluation and Acceptance (LEA) program and is a California Office of the Statewide Health Planning and Development (OSHPD) Preapproved Laboratory (OPL) and approved by the US Army Corps of Engineers (USACE) for testing.

MPE is a Certified Small (Micro) Business with the State of California, Department of General Services, Office of Small Business and DVBE Services (Certification Number 1267520).

The engineers and managers at MPE are always available to you as a resource for discussing or providing input on any geotechnical, soils or construction related issues you may have on your projects.

We are very confident that MPE can be an effective and beneficial member of your team. From geotechnical engineering investigations to full scale earthwork and construction materials to miscellaneous materials testing and special inspection projects, MPE is prepared to provide you with the high quality of service you have come to expect.

Our statement of qualifications with resumes is attached for your review and information.



## COMPANY SERVICES

### GEOTECHNICAL ENGINEERING SERVICES

Geotechnical Engineering incorporates the evaluation of earth materials and development of engineering parameters of soils for design of civil structures. Mid Pacific Engineering's staff of Registered Civil and Geotechnical Engineers and Certified Engineering Geologists have completed a wide range of public and private projects, including residential subdivisions, mid- to high-rise buildings, retail and commercial centers, parks, schools and public infrastructure projects.



Our Geotechnical Engineering services include the following:

- Preliminary Geotechnical Investigations
- Feasibility Studies
- Geotechnical Engineering Investigations
- Geologic Hazards Reports
- Foundation Investigations
- Pavement Analysis and Designs
- Slope Stability Studies
- Levee/Dam Services
- FEMA Certifications
- Geological Investigations and Evaluations
- Seepage Studies
- Seismic Surveys/Rippability Studies
- Distressed Structure Investigations
- Floor Flatness Studies
- Foundation Construction Observation
- Pile Load Test/Driving Observations
- Drilled Pier Observations
- Expert Witness



***EARTHWORK CONSTRUCTION TESTING SERVICES***

Geotechnical Engineering services continue into the construction phase as Earthwork Observation and Testing. Backed by our engineering staff, our technicians observe and test earthwork construction, document the contractor's compliance with the project plans and specifications and provide constructive participation with the construction team to correct deficiencies.



Specific functions of the department include:

- Aggregate Testing
- Borrow Source Evaluation
- Foundation Construction Inspection
- Engineered Fill Quality Assurance
- Subgrade Compaction Testing
- Soils Expansion Potential
- Lime/Cement Stabilization
- Pipeline Video Monitoring
- Mass Grading Observation & Testing
- Utility Trench Backfill Inspection
- Pavement Construction Testing



**CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES & SPECIAL INSPECTIONS**

Construction Materials Engineering and Testing services encompasses testing, inspection and evaluation of the major building materials including concrete, masonry, steel and wood. MPE's Materials Testing and Inspections team has the local knowledge, experience, and qualifications to meet the demands of your project. We understand that timeliness and flexibility are essential to successful projects, and the quality of your construction project is our top concern.



All our field and laboratory technicians maintain current certifications as appropriate to their duties. Special inspection and field testing services include:

- Anchor Bolt and Dowel Load Tests
- Construction Materials Quality Assurance
- Concrete Placement Inspection and Sampling
- Concrete and Reinforcing Steel Testing
- Concrete and Asphalt Mix Design/Review
- Floor Flatness Testing
- Reinforcing Steel Placement Inspection
- Pavement Analysis
- Existing Materials Evaluation, including in-place masonry shear testing
- Moisture Vapor Emission Rate & Rapid RH Testing of Slabs
- Pre-stress and Post Tension Steel Inspection
- Non Destructive Testing (NDT)
  - Ultrasonic
  - Material Thickness Determination
  - Dye Penetrant
  - Magnetic Particle
- Piling and Caissons Testing
- Shotcrete Inspection and Testing
- Shop and Field Welding Inspection and Testing
- Structural Steel Bolting Inspection and Testing
- Spray-Applied Fireproofing Inspection and Testing
- Masonry Inspection including Title 24 - DSA Approved Masonry

MPE has developed one of the few DSA and ASNT Certified Level 2 Non Destructive Testing (NDT) Programs in Northern California. MPE performs AWS & ASME Welder Certifications & Welding Procedures for companies throughout Northern California.

### **WELDING INSPECTION SERVICES**

The welding inspectors at Mid Pacific Engineering are certified by the American Welding Society to ensure that the work produced by welders in shop, and on site, meet specifications for quality and safety. Certification ensures that inspectors have the appropriate skills for determining the quality of welds, using test and measuring instruments to find faulty welds, and AWS codes for compliance.



The following list is a sample of the diligence performed by our certified welding inspectors on each project we inspect:

- **Codes, standards and specifications:** Interpretation of the intent and ensuring the requirements of codes, standards and specifications are met.
- **Welding procedures:** Ensuring that a procedure is available, has been approved and is being employed in production.
- **Witnessing of welder and procedure approval tests:** Witnessing the preparation of test plates and destructive tests and verifying compliance with appropriate standards and specifications.
- **Welder approvals:** Verifying that adequate and valid welder approvals are available, and that only approved welders are used in production.
- **Material identification:** Verify materials against documents.
- **Welding consumables identity:** Verification of correctness of welding consumables (electrodes, filler wires, consumable inserts, gases, fluxes etc.)
- **Pre-weld inspection:** Verification that dimensions, fit-up and weld preparations are in accordance with specifications.
- **Preheating:** Verification that any required preheat is in accordance with the specified procedure.
- **In-process welding inspection and surveillance:** Surveillance during welding to verify compliance with specified procedures including any preheat, interpass temperature control and post heat requirements.
- **Inspection and Test Plans:** Assistance and agreement with the preparation of Inspection and Test Plans (ITP's)
- **Post-weld heat treatment:** Verification, when required that post weld heat treatment has been conducted in accordance with specification requirements.
- **Post-weld visual inspection:** Visual inspection and dimensional check of completed weldment against specification requirements and drawings.
- **NDT reports:** The study and cognisance of NDT results on any welding work for which the welding inspector is responsible. Where the duties of the welding inspector include using NDT methods such as liquid penetrant, magnetic particle, radiography or ultrasonic inspection then it is suggested that he/she obtains certification in accordance with the related approval schemes.
- **Reports:** Evaluation of and preparation of inspection reports for the employer or the client.
- **Records:** Maintenance of records of inspections carried out



**LABORATORY TESTING SERVICES**

Redding: LEA No. 114  
West Sacramento: LEA No. 269/OPL No. 22-15

MPE's laboratories are fully accredited by the Cement and Concrete Reference Laboratory (CCRL) and AASHTO Materials Reference Laboratory (AMRL) and are participants in their proficiency sample programs. MPE's laboratory has been accepted by the California Division of State Architect (DSA) into the Laboratory Evaluation and Acceptance (LEA) program and is a California Office of the Statewide Health Planning and Development (OSHPD) Preapproved Laboratory (OPL) and approved by the US Army Corps of Engineers (USACE) and the California Department of Transportation (Caltrans) for testing.

MPE provides a wide variety of laboratory testing services at our two offices, both in support of our geotechnical engineering, earthwork and construction inspection departments and for outside clients. We provide the basic tests for all the major construction materials, as well as many less common tests. A sampling of our testing includes, but is not limited to:

- Rebar and Structural Steel Testing, including prestressing steel cables and welding procedures
- Concrete testing, including drying shrinkage testing, laboratory mix design and trial batch services
- Masonry materials testing, including drying shrinkage and full-size prism testing
- Soil-cement, CLSM, and grout testing, including laboratory trial batching, time of set, compressive strength and consistency testing
- Aggregate Testing, including gradation, specific gravity, and absorption
- Soils Testing, including common index properties, moisture-density relations, expansion index and unconfined compressive strength

Our laboratory and field testing equipment is regularly calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) as required by the appropriate test methods. MPE's laboratory includes a complete machine shop including a full-size Bridgeport milling machine and a variety of sawing and grinding equipment to fabricate reduced section tensile coupons as well as creating special shapes, fittings and fixtures. MPE's laboratory welcomes the opportunity to work with Client's with special, out of the ordinary, laboratory materials testing projects.

**CERTIFICATIONS**

Our certifications include:

<u>Organization</u>	<u>MPE Certifications</u>
<b>DSA/DGS</b> - Division of the State Architect California Department of General Services	Approved laboratory for performing special inspection, materials testing, and geotechnical services on California public school and hospital construction projects, a distinction not held by all testing firms.
<b>OSHPD</b> - California Office of the Statewide Health Planning and Development	
<b>AASHTO</b> - American Association of State Highway and Transportation Officials	Laboratory accredited by the AASHTO Accreditation Program ( <b>AAP</b> ) based upon laboratory audits and Proficiency Sample Programs by <b>CCRL</b> (Cement and Concrete Reference Laboratory) and <b>AMRL</b> (AASHTO Materials Reference Laboratory).
<b>ICC</b> - International Code Conference	Multiple field personnel maintain Special Inspector Certifications issued by <b>ICC</b> that are required by many local building jurisdictions to perform special inspections per the California Building Code.
<b>AWS</b> - American Welding Society	Multiple field personnel maintain <b>AWS</b> certified welding inspector certification.
<b>ASNT</b> - American Society for Nondestructive Testing	Multiple personnel certified in conformance with <b>ASNT</b> standards to perform nondestructive testing of structural steel welding.
<b>ACI</b> - American Concrete Institute	Multiple field and laboratory personnel maintain <b>ACI</b> certification.
<b>ASTM</b> - American Society for Testing and Materials	Laboratory and field testing complies with <b>ASTM</b> procedures and standards.
<b>CALTRANS</b> - California Department of Transportation	Multiple field and laboratory personnel maintain <b>CALTRANS</b> certifications.
Nuclear Gauge Safety Certification	Multiple personnel are Nuclear Gauge Safety Certified to perform density testing of engineered and structural fill.



## OFFICE LOCATIONS

Mid Pacific Engineering Inc. maintains two fully staffed offices, both with accredited laboratories, to serve Northern California and the Central Valley.



### REDDING

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