

## STATEMENT OF QUALIFICATIONS

### MOUNTAIN ENGINEERING & TESTING, INC.

#### CORPORATE PROFILE

Mountain Engineering & Testing, Inc. (MET) is a professional consulting engineering firm located in Salida, Colorado providing geotechnical engineering, construction materials testing services, and civil engineering including foundation design, individual sewage disposal systems, and drainage studies in the Central Rocky Mountains. The goal of Mountain Engineering & Testing, Inc. is to provide quality, cost-effective engineering and excellent service to every client regardless of project size or complexity. The presence of principals in the office and on the job site supports this goal.

Mountain Engineering & Testing, Inc. brings more than 75 years of combined professional engineering and materials testing experience to our projects. Our philosophy of building long-term client relationships and our service has resulted in many repeat clients and a solid reputation in the engineering community. We understand that both financial and time constraints are important factors to any project and will always try to exceed our clients' expectations.

Our diverse group of clients located throughout Colorado has led to a wide range of varied and complex projects. The projects include geological and geotechnical studies for roads, bridges, pipelines, commercial and municipal structures, dams, and subdivisions. MET has provided construction materials testing services for numerous Colorado Department of Transportation projects, municipalities throughout Colorado, and a wide variety of owners, contractors and suppliers.

#### SERVICES

Mountain Engineering & Testing, Inc. provides complete geotechnical, civil engineering, laboratory, and construction materials testing services. Our specific services include:

- **Geotechnical and Civil Engineering**

- Soil and Foundation Investigations
  - Commercial, Residential and Municipal Structures
  - Roadways, Pavement and Bridges
  - Airports, Reservoirs, and Pipelines
- Drainage Studies
- Foundation Design
- On-site Wastewater Designs

- **Construction Materials Engineering and Testing**

- Mountain Engineering & Testing's field testing is performed by qualified technicians under the supervision of a registered professional engineer. Technicians are certified by ACI, NICET, CAPA, LabCAT, WAQTC, OSHA-40 Hour, MSHA, Troxler and other appropriate agencies. Field testing is performed using ASTM, AASHTO, and other applicable specifications and guidelines. A complete testing and field laboratory can be mobilized to project sites as needed.

- **Laboratory Analysis**

- Mountain Engineering & Testing's in-house laboratory is equipped to test soils, aggregates, concrete, and asphalt. All laboratory testing is conducted in accordance with quality control guidelines of ASTM and other recognized standard test procedures.

## PERSONNEL

### *Professional Staff*

*Richard Brown, P.E.*, leads the engineering activities and has over 29 years of experience in the areas of geotechnical investigations, construction material testing, and structural design. As Principal Engineer, Mr. Brown is responsible for supervision, project review, and project management of geotechnical, civil, and construction materials engineering functions. Projects have included hospitals, correctional facilities, shopping centers, bridges, pipelines, roadways and water treatment facilities in Colorado, Virginia, Idaho, and Texas.

Mr. Brown has conducted geotechnical investigations and managed the construction materials testing for numerous schools in Douglas County, CO, detention centers for Chaffee, Conejos, Arapahoe, El Paso, Weld, Jefferson Counties and the Trinidad Correctional Facility. Projects with the Colorado Department of Transportation have included the Rockrimmon Boulevard and I-25 Interchange in Colorado Springs, CO, Jerry Murphy Boulevard widening in Pueblo, CO, and the 1<sup>st</sup> Street and State Highway 285 Interchange in Loveland, CO, as well as roadway and utility studies for the Denver Metro municipalities. Additionally, Mr. Brown has provided geotechnical studies for taxiways, aprons, roads, parking lots, and utilities at various airports including the Denver International Airport, Denver, CO.

*Dean Larson, CET*, manages the construction observation and materials testing activities and has over 40 years of experience in geotechnical engineering, laboratory analysis, construction observation, and materials testing. As manager, Mr. Larson supervises and reviews the laboratory and field work of the construction materials testing projects. Project plans and specifications are reviewed to summarize testing needs for the project. Mr. Larson's work includes the Buena Vista Airport, Chaffee County Airport, and the annual Street Improvements for the Town of Buena Vista and the City of Salida. Inspection and material testing services have been performed at sewer treatment facilities, dams (including roller compacted concrete), utility lines, correctional facilities, schools, and libraries. Past projects in the Denver Metro area include Stapleton Airport, Denver International Airport as well as numerous major CDOT projects throughout Colorado.

*Tom Karnuta, P.G.*, is a Professional Geologist in Colorado and Wyoming, working in the Arkansas Valley since 1991 and with Mountain Engineering & Testing for the past 6 years. Tom has 17 years experience performing geotechnical studies for residential and commercial projects, highways, bridges, pipelines and dams. Projects include geotechnical and geological field investigations, geologic mapping to identify and mitigate geologic hazards for subdivisions and other civil engineering projects.

### *Technical Staff*

Mr. Shawn Shuey, CET and Mr. Michael Edwards have a wide variety of experience with concrete, soils, and asphalt materials testing and have been employed with Mountain Engineering & Testing, Inc. since 2001 and 2003 respectively. Mr. Shuey and Mr. Green have worked on CDOT projects performing both quality assurance and quality control for clients.

Mr. Shuey is certified for ACI Concrete Field and Laboratory Testing Technician-Grade I, CAPA Level A, B, and Inspector, WAQTC, and Nuclear Density Gauge. Mr. Shuey's inspection and construction materials testing projects include: The City of Salida Hot Water Pipeline Project Phase V; Chaffee County Sewer Enterprise, Johnson Village Sewer Collection System; City of Salida Hot Springs Pool; CDOT concrete paving in Villa Grove; Colorado Division of Wildlife Mt. Ouray Fish Hatchery; Colorado Springs Utilities Otero Pumping Station Expansion and Lower Homestake Parallel Pipeline Project; Twin Rock Pumping Station and the CDOT US Highway 50 Dawson Creek Bridge Replacement Project; CDOT Highway 291 resurfacing; CDOT Highway 114, Saguache Bridge Replacement; and CDOT Highway 285 at Johnson's Village.

## REPRESENTATIVE PROJECTS

### ***Geotechnical Engineering Studies***

#### Tierra del Sol Subdivision Monte Vista, Colorado

A geotechnical study was prepared for the 70 acre subdivision situated on loose sandy soils and shallow ground water conditions. These conditions warranted specific stabilization and drainage recommendations for the building and roadway construction. MET performed the construction material testing for the owner on this project during the roadway construction and utility installations.

Client: Colorado Rural Housing Development Corp., Westminster, CO

#### Heart of the Rockies Regional Medical Center Salida, Colorado

A geotechnical engineering study was prepared for the new hospital site for the Heart of the Rockies Regional Medical Center. The site was analyzed with test borings and test pits for the new hospital and helipad. Shallow water was encountered at the site and piezometers were installed for long term water level readings. Recommendations were provided for earthwork, subsurface drainage, pavement design, helipad, drainage, and concrete.

Client: Heart of the Rockies Regional Medical Center, Salida, CO

#### Buena Vista Airport Buena Vista, Colorado

A geotechnical engineering study was prepared for the new arrival & departures building and apron improvements at the Buena Vista Airport. Recommendations included subsurface soil and groundwater conditions; soil parameters for the foundation design; the use of on-site stockpile material; excavation, drainage, and grading; and cement type.

Clients: ACA Products, Buena Vista, CO; Town of Buena Vista, CO; and SEH, Denver, CO

#### Early Childhood Center Salida, Colorado

A geotechnical engineering study was conducted for the new Head Start building constructed at the site of an existing modular building. Recommendations included foundation design criteria, pavement and parking lot thicknesses, excavation considerations, and construction issues. Additionally, this project will adhere to the green building standards and will attain a Leeds Certification.

Client: Salida School District, Salida, CO

Ski School and Rental Building  
Monarch, Colorado

The geotechnical engineering study was performed for the new Sprung building system to house Monarch Ski Area's Ski School and Equipment Rental Shop located on the Continental Divide in Monarch, Colorado. Mountain springs and soft soils required site stabilization recommendations for the foundation system. In addition, MET conducted the construction materials testing services during the stabilization operations.

Client: Monarch Mountain LLC, Monarch, CO

Colorado State Patrol Building Addition  
Alamosa, Colorado

The geotechnical engineering study included subsurface soil and ground water conditions, foundation types and design criteria, and earthwork and drainage recommendations. Additionally, a refraction microtremor (ReMi) seismic survey was subcontracted for the site to provide specific seismic classifications.

Client: Colorado State Patrol

Arizona Street Reconstruction  
Buena Vista, Colorado

The purpose of this study was to provide pavement section thicknesses for the roadway and recommendations regarding the drainage, grading, and excavations at the project site. Bulk samples of the subsurface materials from the test borings were tested for gradation characteristics, Atterberg Limits, R-Value, moisture content, and water soluble sulfates. Recommendations included rubbilization of the existing asphalt pavement and reuse as base course.

Client: Town of Buena Vista, CO

Del Norte Bank  
Del Norte, Colorado

The Geotechnical Engineering Study prepared for Del Norte Savings & Loan Association included recommendations relative to foundation design criteria, pavement thickness for the parking lot and drives, and excavation and construction issues. Additionally, MET conducted the construction materials testing and observation for the 5,000 square feet bank building.

Client: Del Norte Savings & Loan Association, Del Norte, CO

Water Systems Improvements  
Salida, Colorado

The new 7,900 linear feet of transmission mains and 1.0 million gallon water tank installation required extensive evaluation. Recommendations included stratigraphy, lithologies, and ground water considerations, faults and seismic design, foundations, dewatering, and corrosion protection based on laboratory testing and test pit borings.

Client: City of Salida, CO

## ***Construction Observation and Materials Testing***

### Colorado Department of Transportation

Mountain Engineering & Testing, Inc. has provided inspection and material testing services for numerous CDOT road construction projects that included pavement, bridges, culverts, and embankments. Services included inspection, concrete testing, soil testing, asphalt testing, coring, and related laboratory testing. Recent projects include the following:

CO State 24/US 285, Johnson's Village, CO  
US 50/CO State 135, Gunnison, CO  
US 50, Salida, CO  
CO State 291, Salida, CO  
US 285, Poncha Pass, Poncha Springs, CO  
CO State 114, Saguache Creek Bridge, Saguache, CO  
US 50 Bridge, west of Howard, CO  
US 50 Bridge, Taylor Gulch, Swissvale, CO  
US 160, Cherry Creek to Wildcat Canyon, Durango, CO  
CO State 12, Stonewall to Weston, CO  
US 285/CO State 17, Phase I, Villa Grove, CO  
US 50 Dawson Creek, Gunnison, CO  
US 285 Conejos County Hospital Access, La Jara, CO

### Reservoir and Dam Construction

Mountain Engineering and Testing, Inc. provided construction materials testing for the following dam projects. The dams have ranged from small and large earthen dams to concrete weir diversion structures to roller compacted concrete dams located in the Upper Arkansas Valley to Southern Colorado.

Pueblo Board of Water Works, Busk Ivanhoe Dam; Pitkin County, Colorado  
Pueblo Board of Water Works, Clear Creek Reservoir; Chaffee County, Colorado  
Parkville Water District, Evans Gulch Dam; Leadville, Colorado  
Trail Ridge Dams No. 1 and No. 2; Howard, Colorado  
Droz Creek Dam; Poncha Springs, Colorado  
Goshawk Dam; Conejos County, Colorado  
Trout Creek Dam; Buena Vista, Colorado  
Boss Lake Dam/North Fork Reservoir; Chaffee County, Colorado  
Upper Arkansas Water Conservancy District, North Fork Dam Rehabilitation; Chaffee County, Colorado

### City of Salida Street Reconstruction Salida, Colorado

Mountain Engineering and Testing has provided the construction observation and materials testing services for the street reconstruction projects from 1999 through 2007. Services included inspection, testing soil, concrete, and asphalt for the utilities, curb and gutter, and asphalt pavements.

Client: City of Salida, Salida, CO

Chaffee County Detention Facility  
Salida, Colorado

Testing services included concrete placed for foundation walls, slabs, curb and gutter, as well as soil testing for foundation subgrade, foundation wall backfill, and base course beneath new parking areas and walks. Masonry testing consisted of preconstruction and production testing of masonry mortar, block, and grout.

Client: Schauer Construction, Colorado Springs, CO and Chaffee County Bldg. Dept.

Otero Pumping Station Expansion Project  
Chaffee County, Colorado

On-going material testing has been provided annually for a large scale expansion project since construction commenced. Testing services include field and laboratory testing of soil, concrete, asphalt, grout, and shotcrete. MET conducted the geotechnical investigation which included soil borings, rock coring, and geophysical surveys for the design of the project. Recommendations were provided for rock bolting and soil nail placement for reinforced rock walls in addition to foundation, pipeline excavation, and sewage disposal recommendations.

Clients: Black and Veatch Corp., Colorado Springs, Colorado and Colorado Springs Utilities

Heart of the Rockies Regional Medical Center  
Salida, Colorado

MET provided the required laboratory and soils testing for the new hospital facility in Salida, CO. Testing included the subgrade earthwork for the building site, roadways, surrounding parking lots, and landscape areas. MET also conducted the geotechnical investigation of the building site to determine ground water impact was also conducted.

Contractors: Diesslin Structures, Inc. and Haselden Construction, LLC, Salida, CO

Street Reconstruction  
City of Monte Vista, Colorado

Testing services included laboratory and field testing including soil, concrete, and asphalt for three main streets in Monte Vista, Colorado. Mountain Engineering & Testing, Inc. previously prepared the geotechnical engineering study for this project with recommendations for the street reconstruction.

Client: City of Monte Vista, CO

Walgreens  
Alamosa, Colorado

Mountain Engineering & Testing, Inc. was involved in all phases of this retail facility construction including soils, asphalt, grout, masonry, and concrete testing; coordination with the structural steel inspector, laboratory testing, and daily supervision and inspections.

Client: Wilger Enterprises, Albuquerque, NM

Adams State College-Facilities Services  
Alamosa, Colorado

MET provided construction observation and quality control responsibilities for three projects on the Adams State College campus; the Campus Water System Upgrade, Phase 1; Marvell House Renovation; and the Community Outreach Center Renovations.

Client: Adams State College, Alamosa, Colorado

Harriet Alexander Field  
Salida, Colorado

MET provided construction observation and quality control responsibilities on the project for the rehabilitation of the general aviation apron, new concrete fueling pad, crack sealing, and a new seal coat.

Client: Airport Development Group, Denver, Colorado

**Representative Client List**

A & S Construction, Canon City, Colorado  
ACA Products, Buena Vista, Colorado  
ACI, Alamosa, Colorado  
Adams State College, Alamosa, Colorado  
Airport Development Group, Denver, Colorado  
Black & Veatch Corporation, Colorado Springs, Colorado  
Board of Water Works of Pueblo, Colorado  
Buena Vista Sanitation District, Buena Vista, Colorado  
Bureau of Land Management (BLM), Grand Junction, Colorado  
Butala Construction, Salida, Colorado  
CH2M Hill, Colorado Springs, Colorado  
City of Alamosa, Alamosa, Colorado  
City of Monte Vista, Colorado  
City of Salida, Salida, Colorado  
Colorado Department of Transportation, Denver, Colorado  
Colorado Division of Wildlife, Colorado Springs, Colorado  
Colorado Springs Utilities, Colorado Springs, Colorado  
Crabtree Group, Inc., Salida, Colorado  
East Alamosa Water & Sewer District, Alamosa, Colorado  
HDR Engineering, Denver, Colorado  
Martin/Martin Consulting Engineers, Wheat Ridge, Colorado  
SEH, Inc., formerly Range Engineering, Denver, Colorado  
Schauer Construction Company, Inc., Colorado Springs, Colorado  
Schmueser, Gordon, Meyer, Crested Butte, Colorado  
Ski Monarch, LLC, Monarch, Colorado  
Swift and Associates, Longmont, Colorado  
Town of Buena Vista, Buena Vista, Colorado  
Town of Poncha Springs, Poncha Springs, Colorado  
US Forest Service, Salida, Colorado  
Western States Engineering, Englewood, Colorado  
Wright Water Engineers, Denver, Colorado  
Xcel Energy, Denver, Colorado