

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, foundation designs, individual sewage disposal system design, 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.

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 work with our clients to achieve a balance with their project needs.

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, laboratory, and construction materials testing services. Our specific services include:

- **Geotechnical Engineering**

Mountain Engineering & Testing's Geotechnical Engineering services are provided by licensed engineers and professional engineering geologists with over 40 years of combined experience with the local soils and geology. Our engineers have experience performing geotechnical investigations for commercial, residential, and municipal structures, as well as airports, reservoirs, pipelines, roadways, pavements, and bridges.

- Geotechnical Engineering Studies
- Geological Exploration & Studies
- Pavement Design
- Foundation Design
- Excavation observation
- Percolation Testing
- On-site Wastewater System Designs

○ **Wetlands Consulting**

Mountain Engineering & Testing's personnel perform wetland services in accordance with the US Army Corps of Engineers Guidelines and are familiar with the Rocky Mountain Region wetlands vegetation, soils, and hydrologic indicators.

- Wetlands delineation
- Section 404 permitting
- Wetlands mitigation planning and monitoring

○ **Construction Materials 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, CAPA, LabCAT, WAQTC, OSHA-40 Hour, Troxler and other appropriate agencies. Field testing is performed using ASTM, AASHTO, Colorado Procedures (CP-L), and other applicable specifications and guidelines.

- Moisture/density testing on compacted soils and asphalt
- Steel reinforced concrete observations
- Concrete and Grout testing including: Slump, entrained air, temperature, unit weight, and casting cylinders
- Asphalt placement observation and sampling
- Masonry observation

○ **Laboratory Analysis**

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

- Soils tests include: Standard and modified proctor, gradation, atterberg limits, hydrometer, swell/consolidation, soluble sulfates, salt/sand content, moisture content, relative density, and specific gravity
- Compressive strength testing for concrete, grout, and mortar
- Asphalt tests include: Asphalt content using chemical extraction, gradation, RICE, nuclear pan calibration, and specific gravity
- Asphalt, concrete, and masonry coring

PERSONNEL

Richard Brown, P.E. leads the engineering activities and has over 30 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 Chaffee, Conejos, Arapahoe, El Paso, Weld, Jefferson Counties. Projects with the Colorado Department of Transportation have included the Rockrimmon Boulevard and I-25 Interchange in Colorado Springs, Jerry Murphy Boulevard widening in Pueblo, and the 1st Street and State Highway 285 Interchange in Loveland, 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.

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 12 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.

Greg Snyder has over 10 years of experience in geotechnical and civil engineering applications, quality control and construction materials inspection and testing, and laboratory experience for geotechnical engineering capacities. Mr. Snyder has also worked in many other capacities, including field investigation/inspection, field data interpretation and analysis, computer aided drafting (CAD), engineering calculations/analysis, geotechnical and civil engineering design/observation/testing, laboratory management/coordination, along with various permitting and engineering report preparation. Mr. Snyder has extensive lab testing experience of various construction materials including asphalt, concrete, soils, masonry, and chemical property testing.

Mr. Snyder has field engineering experience including geotechnical inspection, as well as construction observation, testing, and inspection. Mr. Snyder has performed QA/QC engineering and testing on a variety of state and municipal construction projects. Mr. Snyder has performed field inspections, including asphalt design assessments, drilled shaft inspections, reinforced concrete inspections, helical pier inspections, slurry wall inspections and observations, various trench observations and inspections, foundation stabilization observations and inspections, groundwater observation well installations, geotechnical drilling and exploration.

Richard Silkey is an Environmental Scientist that joined the Mountain Engineering team in August 2013. His areas of expertise include wetlands delineation, section 404 permitting, wetlands mitigation, nuclear density testing on soils and asphalt, reinforced concrete observation, concrete field testing, lab and field testing of fly ash and cement treated soil projects, drilled pier observation, helical pier observation, micro-pile observation and general construction observation. He has experience working on CDOT, FAA, municipalities and large commercial and residential developments. He is currently certified in ACI concrete field and strength testing, CAPA level A and inspector, WAQTC soils inspector, and Nuclear Gauge Operator.

REPRESENTATIVE PROJECTS

Geotechnical Engineering Studies

Longfellow Elementary School Salida, CO

A geotechnical engineering study was conducted for the new school constructed on the property of the existing school grounds. Recommendations included foundation design criteria, pavement and parking lot thicknesses, excavation considerations, and construction issues. This project will adhere to the green building standards and will attain a Leeds Certification. Additionally, a refraction microtremor (ReMi) seismic survey was subcontracted for the site to provide specific seismic classifications.

Client: Salida School District, Salida, CO

Salida Wastewater Treatment Plant Salida, CO

MET prepared the geotechnical report for the proposed project and also conducted the material testing during the project construction. The project consisted of numerous tanks extending below the water level of the adjacent Arkansas River. Foundation recommendations for concrete construction below ground water were provided.

Client: City of Salida

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

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. The site was stabilized with the construction of a fill pad. Recommendations were provided for earthwork, subsurface drainage, pavement design, helipad, drainage, and concrete.

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

Street Reconstruction
Buena Vista, Colorado

Geotechnical studies were conducted on numerous streets and roadways to provide pavement section thicknesses for the roadways 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 have included rubbilization of the existing asphalt pavement and reuse as base course.

Client: Town of Buena Vista, CO

Crestone Charter School
Crestone, CO

Mountain Engineering & Testing, Inc. (MET) prepared the Geotechnical Engineering Study and provided the Material Testing during construction for the new school building in Crestone, Colorado. The new building was constructed through funding from the BEST program. Recommendations were provided for building foundation and site preparation in loose soil conditions.

Client: Owner's Representative, ARC Integrated Program Management, Inc.

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

Ski School and Rental Building
Monarch, Colorado

The geotechnical engineering study was performed for the new building 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

Natural Resources Conservation Service Building
Salida, Colorado

Mountain Engineering & Testing, Inc. was involved in the geotechnical engineering study for the building and parking lot. Recommendations also provided for US Highway 50 acceleration and deceleration lanes.

Telecommunication Towers

Agua Ramon in Del Norte, CO

Tenderfoot Mountain in Salida, CO

Geotechnical engineering studies were conducted for telecommunication towers on mountain peaks. A 90-foot high tower was planned on Agua Ramon Mountain near Del Norte, Colorado. Subsurface conditions at the site were investigated with continuous rock coring into the Fish Canyon Tuff Formation for RQD measurements of the rock quality. Rock coring conducted on Tenderfoot Mountain in Salida, CO classified the bedrock as volcanic basalt.

Clients: Tri-State Generation and Transmission Association, Westminster, CO
City of Salida, Salida, CO

Windsor Hotel

Del Norte, Colorado

This geotechnical engineering study was performed for the existing Windsor Hotel in Del Norte, Colorado. The geotechnical study was conducted to develop foundation recommendations to underpin the foundation of the historic hotel.

Client: The Windsor Restoration and Historical Association, Inc. Del Norte, CO

Garfield Lift

Monarch, Colorado

The geotechnical engineering study was performed for repairs to the existing lift tower 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

Geologic Studies

Willows Subdivision

Salida, CO

This geologic suitability study was prepared for the proposed Willows Subdivision located along the Arkansas River in Chaffee County, CO. The study was conducted to identify geologic hazards on the 40 acre site and provide recommendations for mitigation, to assess the suitability of the site for individual sewage disposal systems, and to provide information regarding the hydrogeology and groundwater resources of the proposed subdivision. The scope of the study included a review of applicable geologic literature, field geologic reconnaissance, and a review of existing domestic well information from selected surrounding properties.

Client: V Bar X, Inc.

30 Acre Development

Leadville, CO

This geologic suitability Study was prepared for the proposed development located in Leadville, CO. The subdivision consists of 30 acres for residential and commercial

development with access roads and open space. The site is located approximately one mile northwest of Leadville.

Client: Evergreen Land Development

Tessera Solar Project
Saguache County, CO

This geologic suitability study was prepared for the proposed Tessera Solar Project located in Saguache County, Colorado. The study was conducted to identify potential geologic hazards and provide recommendations for mitigation. The proposed project consists of developing a 200MW solar plant. The project will use approximately 1500 acres for the initial phase.

Client: Ecosphere Environmental Services

Construction Observation and Materials Testing

City of Salida Wastewater Treatment Plant Salida, Colorado

Mountain Engineering & Testing, Inc. was involved in all phases of this newly constructed/renovated 2.75M gallon wastewater treatment facility. Onsite testing and construction observations included soils, asphalt, masonry (grout and mortar), and concrete testing. Over 100 sets of concrete cylinders were made for the project with the majority made during difficult winter conditions.

Client: City of Salida, Salida, CO

MillerCoors Monte Vista, Colorado

MET provided the required materials testing for expansion of a large granary storage facility owned by MillerCoors, Inc. Testing included the soils testing of the earthwork for the building site, structural concrete testing, and masonry testing. MET also conducted inspections and observations on concrete reinforcement, helical pier installation, and masonry reinforcement.

Contractors: ABC Concrete, Binghamton, UT; Halverson Company, Salt Lake City, UT

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 provided the same testing services for an expansion of the hospital in 2011. 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

Natural Resources Conservation Service Building Salida, Colorado

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

Client: ReGen, LLC., Denver, CO

Black Cloud Mine Reclamation Leadville, Colorado

Concrete and soils testing has been provided for a large scale mine reclamation project since reclamation activities commenced in 2013. Testing services include field and laboratory testing of soils and concrete. MET performed testing on capping fill placed over mine tailings and construction of a new spillway at the dam head.

Clients: SLV Earthmovers, Monte Vista, CO

AIRPORTS

Lake County Airport **Leadville, Colorado**

MET conducted construction materials testing at the Lake County Airport for a paved expansion around the main airport facility. Testing services included soils, concrete, and asphalt testing prior to paving operations. MET also performed asphalt paving inspections and testing during paving operations.

Clients: ACA Products, Buena Vista, CO

Buena Vista Airport **Buena Vista, Colorado**

MET performed several types of materials testing including soils, concrete, and asphalt at the Buena Vista Airport in the past years for the various airport expansion projects.

Clients: ACA Products, Buena Vista, CO; Town of Buena Vista, CO.

Harriet Alexander Airfield **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

SCHOOLS

Longfellow Elementary School **Salida, Colorado**

MET has provided testing services which included laboratory and field testing of soil, concrete, masonry (grout, mortar, prisms, and coring), and asphalt for an elementary school. Inspections/observations of this project included steel reinforcement, masonry construction, and earthwork. Mountain Engineering & Testing, Inc. previously prepared the geotechnical engineering study for this project.

Client: Salida School District, Salida, CO

Avery Parsons Elementary School **Buena Vista, Colorado**

MET has provided testing services which included laboratory and field testing for soil and concrete for an expansion to the Avery Parsons Elementary School. Mountain Engineering & Testing, Inc. previously prepared the geotechnical engineering study for this project.

Client: Buena Vista School District, CO

Early Childhood Centers
Salida, Center and Del Norte, Colorado

Geotechnical engineering studies were conducted for the new Head Start buildings. Recommendations included foundation design criteria, excavation considerations, and construction issues. Additionally, these projects will adhere to the green building standards and will attain a Leeds Certification.

Clients: Salida School District, Salida, CO; Head Start Program, Center, CO; Head Start Program, Del Norte, CO

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

ROADWAYS

City of Salida Street Reconstruction
Salida, Colorado

Mountain Engineering and Testing has provided and currently provides, the construction observation and materials testing services for various city of Salida street reconstruction projects since 1999. Services include concrete, soils, and asphalt testing for the utilities, curb and gutter, and asphalt pavements. Inspections for these projects also include concrete reinforcement, and asphalt inspections during laydown operations.

Client: City of Salida, Salida, CO

Street Reconstruction
City of Monte Vista, Colorado

MET has provided testing services which 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

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 285/CO State 17, Phase I, Villa Grove, 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
Zapata Falls Remediation; Hooper, CO
Ute Creek Dam; Ft. Garland, Colorado

ELECTRICAL SUBSTATION CONSTRUCTION

Mountain Engineering and Testing, Inc. provided construction materials testing on construction of the following electrical substation projects. The electrical substations have ranged from small additions/expansions to larger removal/renovations by Excel Energy and Tri-State Energy companies; ranging from the San Luis Valley to Summit County Colorado. MET has provided both field and laboratory testing for earthwork portions for the projects, concrete testing for drilled piers and caissons on several of the substations, and geotechnical reports for several substations.

Wavery Substation; Waverly, CO— Tri-State Energy
Plaza Substation; Monte Vista, CO— Tri-State Energy
Poncha Junction Substation; Poncha Springs, CO— Excel Energy
Malta Substation; Lake County, CO— Excel Energy
Climax Substation; Climax Mine, Leadville, CO— Excel Energy
Mayflower Substation; Climax Mine, Summit County, CO— Excel Energy

REPRESENTATIVE CLIENT LIST

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
CH2M Hill, Colorado Springs, Colorado
City of Alamosa, Alamosa, Colorado
City of Monte Vista, Colorado
City of Salida, Colorado
Colorado Department of Transportation, Denver, Colorado
Colorado Division of Wildlife, Colorado Springs, Colorado
Colorado Springs Utilities, Colorado Springs, 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
Schmueser, Gordon, Meyer, Gunnison, Colorado
Ski Monarch, LLC, Monarch, Colorado
Town of Buena Vista, Buena Vista, Colorado
Town of Poncha Springs, Poncha Springs, Colorado
W. W. Wheeler and Associates, Englewood, Colorado
US Forest Service, Salida, Colorado
Xcel Energy, Denver, Colorado