Engineering Analytics, Inc.

TECHNICAL SERVICES

Project List

- **Distress Due to Expansive Soils**
  Denver, CO
- **Pavement and Ettringite Investigation**
  Denver, CO
- **Roadway Fills and Landslide Stabilization**
  Colorado Springs, CO
- **Distress Due to Collapsible Soils**
  Basalt, CO
- **Retaining Wall Failure**
  Port Moody, British Columbia
- **Grading and Drainage Investigations**
  Colorado Springs, CO
- **Pinal Creek Contaminant Assessment**
  Gila County, AZ

Clients

- **Sullan^2, Sandgrund, Smith & Perczak, P.C.**
- **Benson & Associates, P.C.**
- **Lottner, Rubin, Fishman, Brown + Saul**
- **Federal Aviation Administration**

We provide expert witness testimony and litigation support for construction defect cases.

CONSTRUCTION & DESIGN DEFECT INVESTIGATION

Engineering Analytics, Inc. (EA) provides litigation and forensic support with technical expertise in forensic studies. EA staff has performed forensic investigations on over 200 projects in the last 10 years and routinely provides expert witness services in the following areas:

- expansive soils, pavement, and ettringite investigations,
- settlement and compaction investigations,
- landslide investigations,
- hydrocollapse investigations,
- retaining wall investigations,
- surface grading and drainage investigations, and
- tailings dam failure investigations.

Expansive Soils, Pavement, and Ettringite Investigations

Engineering Analytics has extensive experience with foundation and pavement engineering on expansive soils. Each case includes:

- reviewing original soils reports and construction documents,
- sampling and laboratory testing of soils,
- preparing an opinion report detailing causes of failure,
- identifying factors contributing to failure,
- predicting heave amounts and required pier lengths,
- reviewing applicable or recommended repair measures, and
- testifying at depositions or trials, if necessary.

Dr. John Nelson, CEO, has extensive experience in professional practice, research, and litigation support dealing specifically with expansive soils. Dr. Nelson is the author of “Expansive Soils; Problems and Practices in Foundation and Pavement Engineering,” the book used as a reference by practicing engineers, and a textbook for college graduate level courses.

Settlement and Compaction Investigations

Engineering Analytics has extensive experience evaluating structure distress due to poorly compacted fills. Our engineers have conducted numerous consolidation/deformation analyses and have designed methods to accelerate consolidation to accommodate earlier construction or remediation. We have developed models to predict settlement caused by poorly compacted fills and calculate the time required for consolidation to be completed. We can use a variety of methods to remediate structures constructed on poorly compacted fills.

Landslide Investigations

Engineering Analytics has extensive experience with landslide investigations, analysis, and mitigation design. Our state-of-the-art knowledge allows us to provide the following services:

- geologic study and site investigation,
- infiltration and seepage computer modeling,
- slope stability analyses,
- existing and future damage assessment, and
- slope stabilization plan development.

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TECHNICAL SERVICES

CONSTRUCTION & DESIGN DEFECT INVESTIGATION

Hydrocollapse Investigations

Engineering Analytics, Inc. engineers perform geotechnical investigations on single- and multi-family residential structures constructed on collapsible soils. We identify causes and factors contributing to structure failure and identify a variety of repair measures. We provide foundation remediation services such as evaluating, designing, and implementing underpinning with a deep foundation system or compaction grouting.

Retaining Wall Investigations

Engineering Analytics staff has extensive experience performing forensic investigations of retaining wall system failures. We develop retaining wall stabilization remediation plans using tasks such as:

- reviewing design and construction documents,
- sampling and testing soil samples,
- analyzing seepage and slope stability, and
- preparing opinion report detailing failure causes.

Geotechnical & Geoenvironmental Engineering Consultants

Surface Grading and Drainage Investigations

Engineering Analytics provides elevation survey services evaluating grade in areas where drainage concerns are identified. It is crucial to have sufficient positive grade around structures to minimize distress caused by soil movement. Poor grading often exacerbates problems for structures built on problematic soils. We design and construct surface drainage remediation plans.

Tailings Dam Failure Investigations

Engineering Analytics provides forensic investigations and litigation support for cases involving tailings or water storage dam failure. Our dam failure evaluation project expertise includes, but is not limited to:

- seepage analysis identifying contaminant source,
- slope stability analysis evaluating tailings dam stability,
- cover cracking evaluation,
- liner design evaluation,
- water balance calculations, and
- remediation cost allocation.

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