

# **Associated Engineering & Technology, Inc.**

4S 100 North Rt. 59, Suite 10 . Naperville, IL 60563-9697

Phone: (630) 420-8300, Fax: (630) 420-8319

[www.aetchicago.com](http://www.aetchicago.com)

## *About Us*

**Associated Engineering & Technology, Inc. (AE&T)** is a professional engineering company licensed by the Illinois Department of Professional Regulations (IDPR Design Firm # 184-003234) and the state of Indiana. AE&T provides consulting engineering services in geotechnical, environmental, structural, construction monitoring and materials testing. It is pre-qualified by the Illinois Department of Transportation for both Typical and Complex Geotechnical Engineering Services. AE&T is certified as a Disadvantaged Business Enterprise (DBE) and Minority Business (MBE) by the Illinois Department of Transportation (IDOT) and Capital Development Board (CDB/CMS). AE&T carries general liability, workmen's compensation and professional liability insurance and is a member and signatory of the Local 150, International Union of Operating Engineers (IUOE). Our offices are located in Naperville, IL and Highland, IN.

AE&T merged with Applied Soil Mechanics, Inc. established by Mr. Max L. Calhoun, P.E., S.E. in 1971, to provide the highest level of geotechnical engineering, construction monitoring and testing services for school buildings, commercial and residential developments, airports, telecommunication tower sites, highways, infrastructure and other development projects.

### ***We solicit your inquiries in:***

**GEOTECHNICAL ENGINEERING**  
**CONSTRUCTION MONITORING**  
**MATERIALS TESTING & INSPECTION**  
**ENVIRONMENTAL ENGINEERING**  
**STRUCTURAL ENGINEERING**

Our engineers are members of the ASTM, ACI, ASCE and other professional organizations and licensed in several states. Our technicians are certified by ACI, IDOT, AWA, Troxler and OSHA including 40 hours HAZMAT.

If you are in the area, please stop by our office or visit our web site [www.aetchicago.com](http://www.aetchicago.com)  
Please contact us for more information on our capabilities and professional services.

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## **GEOTECHNICAL ENGINEERING**

Associated Engineering & Technology, Inc. merged with Applied Soil Mechanics, Inc. of Naperville, IL, established in 1971. AE&T is pre-qualified by the Illinois Department of Transportation for both Typical and Complex Geotechnical Engineering Services.

Our state-of-the-art soil laboratory testing capabilities also include USCS/AASHTO Soil Classification, Grain Size and Hydrometer Analysis (AASHTO T27/T11 and T88), Specific Gravity (AASHTO T100) and Atterberg Limits (AASHTO T89, T90 and T92), Standard and Modified Proctor Tests (ASTM D698 and D1557), Coefficient of Permeability-ASTM D5084 (Flexible Wall), California Bearing Ratio (ASTM D 1883-99), Consolidation Test (ASTM D 2435-96/AASHTO T216), ASTM D 3080-98 (Direct Shear Test), ASTM D 2166-00 (Unconfined Compressive Strength) and various other ASTM standard tests.

***Our geotechnical services comprise:***

**SOIL BORING**

**FIELD AND LABORATORY TESTING**

**SHALLOW AND DEEP FOUNDATION ANALYSIS**

**SUBGRADE EVALUATION AND TESTING**

**ROAD/PAVEMENT DESIGN**

**SLOPE STABILITY ANALYSIS**

**DESIGN OF RETAINING STRUCTURES**

**FOUNDATION RECOMMENDATION**

**GEOTECHNICAL REPORT**

Our engineers are members of the ASTM, ACI, ASCE and other professional organizations and licensed in Illinois, Indiana, Wisconsin, Iowa, Nebraska, Ohio, Pennsylvania and other mid-western states. Our technicians are well-trained and certified in their respective disciplines.

***Max L. Calhoon, P.E., S.E.***

*Chief Engineer*

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### **ENVIRONMENTAL STUDY**

Associated Engineering & Technology Inc. provides professional solutions toward our society's goals for clean air, water, and soil in today's complex industrial environment. We provide environmental site assessment for commercial real estate and property transactions per ASTM E1527/28-00 standards. We have successfully completed numerous environmental site assessments for the telecommunication tower sites in Illinois, Indiana, Wisconsin, Minneapolis, North Dakota, Kansas, Missouri, Ohio, Pennsylvania and other mid-western states. Our engineers are fully aware of the latest federal, state and local regulatory compliance requirements and ASTM procedures. We pride ourselves on providing quick-response that help clients meet their closing dates.

- **ENVIRONMENTAL SITE ASSESSMENT (Phase I & II)**
- **NEPA/FCC SCREENING**
- **EXPLORATION DRILLING / PHASE II ESA**
- **CONTAMINATION EVALUATION AND DELINEATION**
- **LANDFILL DESIGN & CONSTRUCTION MONITORING**
- **MONITORING WELL INSTALLATION**
- **RECOVERY WELL INSTALLATION**
- **FEMA FLOOD/HYDRAULIC STUDY**
- **AIR QUALITY MONITORING & TESTING**
- **HAZARDOUS WASTE SITE INVESTIGATION**

AE&T can identify the most effective and lowest-cost methods for remediation of contaminated property. We evaluate and implement solutions acceptable to regulatory agencies.

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## CONSTRUCTION MONITORING & MATERIALS TESTING

Associated Engineering & Technology, Inc. provides quality control, inspection and testing services for buildings per ACI and Building Code requirements, highway bridges per AASHTO specifications and railway bridges per AREA manual.

- **EARTHWORK MONITORING**
  - FILL MONITORING AND COMPACTION TESTING
  - BEARING CAPACITY / SUBGRADE EVALUATION FOR FOOTINGS & FLOOR SLAB
  - PILE AND PLATE LOAD TESTS (ASTM D1143) / CAISSON INSPECTION
  - ROAD/PAVEMENT SUBGRADE EVALUATION, PROOF ROLLING, STATIC AND DYNAMIC CONE PENETRATION TESTING (DCP) AND FIELD TESTING FOR CBR, IBR AND IBV TO ESTIMATE DEPTHS OF REMEDIAL TREATMENT FOR WEAK SOILS. FIELD DENSITY TESTING BY SAND CONE METHOD (ASTM D 1556) OR NUCLEAR DENSITY GAUGE.
  - UTILITY TRENCH EXCAVATION AND BACKFILL COMPACTION TESTING
  - EMBANKMENTS, RETENTION PONDS, EARTH BERMS, LANDFILLS AND DYKES.
- **CAST-IN-PLACE CONCRETE** – FIELD CONSTRUCTION QUALITY CONTROL (CQC) OF CONCRETE MIXTURES, PORTLAND CEMENTS (ASTM C 150), WATER – CEMENT RATIO (W/C), FLUIDITY OF CONCRETE (SLUMP TEST), GRADATION OF AGGREGATES (ASTM C33 & C330), CHEMICAL AND MINERAL ADMIXTURES (ASTM C494/C260 & C618), AIR CONTENT, SETTING TIME & TEMPERATURE.
- FIELD SAMPLING AND TESTING OF FRESHLY MIXED CONCRETE (C172 & C31) FOR COMPRESSIVE (C39), FLEXURAL (C21) AND TENSILE STRENGTH (C496) PER ASTM SPECIFICATIONS.
- FORMWORK (ACI 347R, SP-2 & SP-4), BATCH PLANT AND REINFORCING STEEL (ACI 315) INSPECTION
- **STRUCTURAL STEEL FRAME** INSPECTION PER AISC LRFD SPECIFICATIONS FOR WALL BEARING, SKELETON AND LONG-SPAN FRAMING INCLUDING LATERAL BRACINGS. REVIEW OF FABRICATOR'S SHOP DRAWINGS FOR FLOOR AND ROOF TRUSSES. VISUAL INSPECTION OF FILLET AND GROOVE WELDING PER AWS D1.1 "STRUCTURAL WELDING CODE" AND HIGH STRENGTH BOLT CONNECTIONS (A325 OR A490) AND UNFINISHED BOLTS (ASTM A307).
- **CONCRETE MASONRY** GROUT AND MORTAR TEST (ASTM C270, C780 & C 476) FOR WORKABILITY, SHRINKAGE, THERMAL EXPANSION AND STRENGTH.
- **ROOFING INSPECTION** – MOISTURE, APPLICATION, MATERIALS TESTING
- **MECHANICAL/HVAC SYSTEM** INSPECTION
- **ASPHALT AND BITUMINOUS PAVEMENT** CONSTRUCTION QUALITY CONTROL
- **RETAINING WALLS** – EARTH RETAINING AND FREE-STANDING

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## **PARTIAL PROJECT LIST**

### ***INDUSTRIAL/COMMERCIAL BUILDINGS, TELECOM SITES AND LANDFILLS***

#### **Chicago Manufacturing Campus Infrastructure / Ford Supplier Park. 2003**

Construction quality control and materials testing services comprising soils, concrete, steel welding, roof inspection for infrastructure improvements and construction of five industrial buildings and parking areas at a 155-acre Brownfield site.

#### **Sprint PCS, T-MOBILE, WFI and other Wireless Telecommunication Sites (IL, IN, WI, OH, PA, NE, IA, MN, KS, MO). 1998 to Present.**

Geotechnical, Environmental, Structural, Surveying, Tower Analysis, Rooftop and Foundation Design for monopole, guyed and self-supporting towers for specific loading per TIA/EIA-222-F. Construction monitoring, inspection/testing services for more than 300 monopoles, lattice and guyed towers, including installation of caisson foundations, mat footing and equipment platform.

#### **Midway Airport Terminal Development, Chicago, IL. (\$650m project), 2000- 02**

Provided construction quality control for a 950,000 SF new terminal building and concourse HVAC system installation to Rust-Kenny Joint Venture.

#### **La Valley Greens Development, St. Kitts Island, West Indies. 2004**

Provided Soil Investigation & Hydraulic Conductivity study for 600 acre La Valle Greens Residential Development, Golf Resort, Club House, Marina & de-salination plant in the exclusive Caribbean Sea volcanic island resort. (\$25 million project)

#### **Retail Center for System 27 Corporation, Naperville, IL, August 2005 to present**

Two-story 40,000 square foot retail center comprising two steel and masonry buildings.

#### **Brinks Incorporated Corporate Office, Chicago, Illinois. July – December 2003**

76,984 SF pre-cast concrete facility comprising slab-on-grade construction on a 6.9-acre site.

#### **Construction & General Laborer's District Council of Chicago, Burr Ridge, IL 2003-2004**

45,360 SF three-story office building with a 157 car parking lot in Burr Corporate Park.

#### **Network Technology Center Building, Cingular Wireless, Schaumburg, IL. 2004**

Construction monitoring and testing for 25,000 square feet steel frame/masonry building.

#### **Ogden Bend Office Building, Naperville, IL. 2005**

Construction monitoring and testing services for 27,000 square feet building.

#### **Naperville Fire Station #9, Ogden Avenue, Naperville, IL – 2005**

#### **Winnetka Fire Station, Willow Road, Winnetka, IL – 2005**

#### **LANDFILL PROJECTS:**

**CID LF, Chicago, IL; Countryside LF, Grayslake, IL; Woodland LF, Elgin, IL; Settlers' Hill LF, Batavia, IL; Enviro-Fill, Peoria, IL**

Ongoing projects entailing earthwork monitoring, compaction testing, laboratory testing, gas recovery system installation monitoring and pressure testing, quality control and field testing of clay and HDPE liner and geo-fabric placement for new cell and final closure of active cells.

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## SCHOOL BUILDINGS & GROUNDS

### School Town of Munster, IN. (Project Cost > \$60 million). 1996 – 1999 & 2003.

Munster High School  
Wilbur Wright Middle School  
Frank Hammond Elementary School  
Eads Elementary School  
Elliot Elementary School

### School City of Hammond, IN. (Project Cost > \$500 million). 1998 – Present.

Jefferson High School  
Clark High School  
Morton High School  
Hammond Senior High School  
Hammond Gavitt High School  
Morton Elementary School  
Edison Elementary School  
Maywood Elementary School  
Lake Central Middle School, St. John, IN

### Schools in Greater Chicago/Northwest Indiana Area

Addison School District – Fullerton, Ardmore, Army Trail Elementary, Indian Trail Jr. HS – current  
Manhattan Elementary School, Manhattan, IL April 2005 – current  
Pleasantdale Elementary School, La Grange, IL August 2005  
Lake Central School District, St. John, IN April 2005  
Libertyville High School Building & Gymnasium additions. Feb. 2005  
Vernon Hills High School, (Geotechnical – March 2005  
Libertyville High School, Libertyville, IL (Geotechnical - Jan. 2005)  
Manhattan Elementary School, Manhattan, IL (Geotechnical/Construction Monitoring & Testing)

## RESIDENTIAL DEVELOPMENTS

**AE&T/ASM** provided construction monitoring and geotechnical engineering services for the following residential subdivisions in Chicago and northwest Indiana:

- **2005:** 500 acre Henneberry Woods subdivision, Oswego, IL., 225 acre Foxborough Estates, Mokena, IL , 150 acre Ashwood Park North, Naperville, IL., 160 acre Crystal Brook subdivision, Frankfort, IL., English Rows Town homes & Retail Center Development, Naperville, IL.
- Sand Creek Development, Coffee Creek Development, Tall Grass, White Eagle, Hobson's Pond, Prairie Crossing, Royce Woods, Ashbury, Creekside, Harmony Grove, Stillwater, High Meadows, Champion Creek, Clearwater, Saddle Creek, Forest Gate, River Run, Blazing Trails, Black Walnut Trails, Stone Haven, Park Place, Nadelhoffer Woods, Gilmore Farm, Fairfield Village, Princeton Estates, Forest Ridge, Wind Ridge, Spring Meadow, Sanctuary, Kinloch, Dayfield, Chelsea, Deerpath, Swanbrook, Heron Creek, Wooded Creek, Seasons Ridge, Orchard Valley, Nature's Edge, Chicory Place, Indian Trail Estates, Rose Hill, 20<sup>th</sup> Century Homes (First Country Homes).