

Wireless Communications

AMEC's expertise extends to all phases of cell tower siting, permitting and construction

AMEC is a leader in providing environmental, regulatory, and geotechnical engineering solutions for wireless communication projects worldwide. AMEC engineers and environmental specialists are familiar with the varying wireless network technologies, including: advanced mobile phone service (AMPS), third-generation (3G), and the more common code division (CDMA) or time division multiple access (TDMA) technologies. AMEC can provide physical siting solutions based on the technology's requirements.

AMEC maintains facilities in the United States, Canada and 38 other countries. Our professional staff includes environmental planners, geologists, geotechnical engineers, hydrogeologists, aquatic and terrestrial biologists, meteorologists, environmental engineers, chemical engineers, public health specialists, materials inspection professionals and archaeologists.

In July 2001 *Engineering News-Record* magazine for the second consecutive year ranked AMEC as the number one international design firm and among the top environmental firms. We are successful because we understand the value of long-term client relationships that are built on competence, trust and reliability.



Environmental Services

AMEC's environmental services address the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and/or the Resource Conservation and Recovery Act (RCRA). Environmental services include: project impact assessments for visual, cultural and biological resources, among others; impact modeling and mitigation monitoring; hazardous materials characterization; urban planning (e.g. zoning); and geographical information system (GIS) design, implementation and maintenance.

AMEC performs environmental site assessments for wireless communication clients in support of property development. Environmental site assessments are performed in conformance with applicable standards, including:

- American Society for Testing and Materials (ASTM) Standard Practices for the Environmental Assessments Transaction Screen Process for Limited Phase I Environmental Site Assessments
- NEPA Requirements
- Federal Communications Commission (FCC) Regulations
- Applicable State Environmental Laws

Geotechnical Services

The geotechnical services provided by AMEC for wireless communication projects address both design and construction considerations at the tower site. Site design factors such as bearing capacity, slope stability, excavation, erosion potential, liquefaction and groundwater issues are approached with an in-depth knowledge of conditions relevant to the project area.

Whether it is a monopole, self-supporting, or guyed tower, AMEC can provide testing and inspection of the foundation support for the towers. This includes: density testing; footing inspections; and plasticity indices. In addition, we offer materials testing services, such as inspection of foundation reinforcement and steel structure testing. Typical foundation types evaluated include drilled piers, spread footings, mat foundations, and rock anchors.

AMEC provides quality assurance/quality control (QA/QC) services to verify compliance with geotechnical engineering criteria. In addition, AMEC is able to prepare construction documents and QA/QC testing programs prior to construction. We also provide support services during construction, including: concrete, asphalt, soil subgrade and backfill monitoring.



Permitting and Information Management

AMEC assists wireless communication clients through the environmental permitting process, as well as the construction and site design permitting processes. AMEC has an accomplished track

record of helping clients install systems that meet specific information-tracking and reporting requirements.

At AMEC, we understand the high demand for wireless communication projects. Our integrated, multi-disciplinary staff provides for all cultural, geographic, aesthetic and geotechnical aspects of these time-sensitive projects. AMEC can offer the extensive resources of a large firm, while maintaining the responsiveness of a smaller local consulting company. This business philosophy has brought AMEC worldwide success and recognition as a well respected agent for both public and private entities seeking our services.



AMEC's Earth & Environmental operations have been pleased to work with many wireless communications clients, including:

AirTouch Cellular
Alltel
AT&T Wireless
Cellular One
Koll Communication
McKenzie Telecommunication Group
Motorola Network Services
Nextel Communicaitons
Pathnet
Santa Barbara County
Sprint
US West New Vector Group
Voicestream
Washington State

**For a list of office locations, company contacts and other services refer to:
www.amec.com**