Protective Engineering for Airports
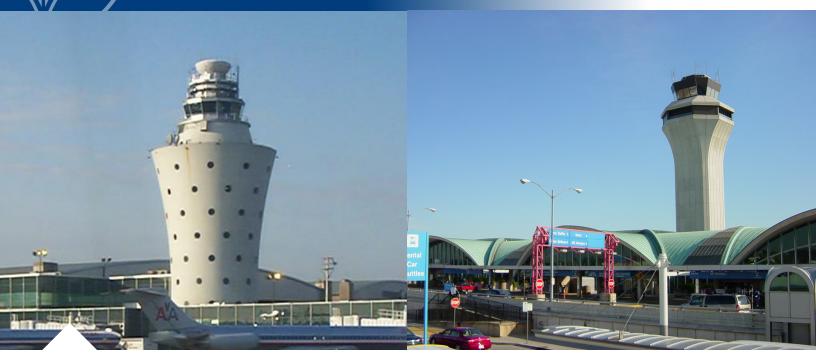
Applied Research Associates (ARA) provides design and engineering services to help protect

- People
- Facilities
- Operational capability
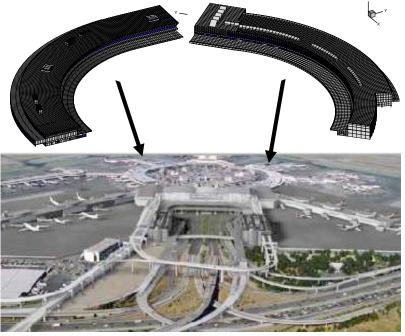- Critical equipment/systems that support the National Airspace System (NAS) infrastructure

ARA developed the Security Reference Manual and blast standard for the U.S. Federal Aviation Administration (FAA).
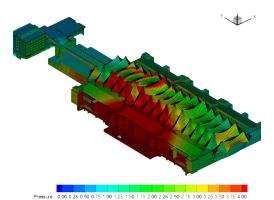
Advanced Modeling

- Blast load engulfment
- Structural response and damage prediction
- Fragmentation debris fields
- Vehicle impact

Airport Assessments

ARA has performed blast and security assessments on over 100 airport & aviation facilities.

Pressure: 0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00

Blast-Resistant Design

ARA is the industry leader in advanced modeling and design for explosive effects. ARA's advanced integrated modeling also includes high-end micro- and macro modeling techniques to develop a full-spectrum, time-dependent assessment of the entire disaster and response picture.

- Cognitive agent-based modeling for assessment of human response
- Physics-based modeling for assessment of the ambient physical effects of the event (blast, chemical, biological, radiological and nuclear, etc.)
- Mapping of critical interdependencies throughout the organizational response and critical infrastructure chain.

ARA Provides Services To

- Airports
- Air Traffic Control Towers
- Aircraft Fuel Storage Areas
- Air Route Control Centers
- Support Critical Infrastructure Systems

ARA's Services Include

- Airport Security Plan
- Blast Analysis and Design
- Advanced Modeling
- Progressive Collapse Analysis and Design
- Explosive Testing
- Force Protection Systems
- Risk and Vulnerability Assessments
- Security Concept and Master Planning
- Forensic Analysis
- Security Criteria Development and Review
- Screening Checkpoint Configuration
- Evacuation Modeling and Simulation
- Perimeter Protection
- Extreme Load Designs
- Disaster Management Planning

Selected Clients

- Washington Reagan International Airport
- Miami International Airport
- San Francisco International Airport
- Denver International Airport
- St. Louis International Airport
- Minneapolis – St. Paul International Airport
- Kansas City International Airport
- Dallas Love Field Airport
- Salt Lake City International Airport
- New York-LaGuardia Airport