

Featured Project



San Francisco International Airport

San Francisco, California

San Francisco International Airport (SFO) sits on approximately 150 acres in the San Francisco Bay Area and accommodates over 1,100 arrival/departure flights per day, among 40 different airlines. Over its 84-year history SFO has regularly engaged in improvement projects to keep up with ever-increasing air travel requirements.

In 1998, SFO commissioned an infrastructure improvement/maintenance plan encompassing the following site utilities: water, storm water, sanitary/industrial sewers, power, telecommunications, natural gas, and aviation fuel. ArcSine Engineering was retained to perform detailed field investigations and provide as-built documentation of the airport's telecommunication infrastructure for 90 of 210 existing manholes located throughout the airport complex. ArcSine's deliverables were critical inputs to the Airport's 5-Year Capital Improvement/Maintenance Plan.

Much of the work was in some of the most congested and busy roadways and pedestrian areas around the airport. ArcSine authored detailed traffic plans, obtained approval, and executed traffic control.

ArcSine Engineering's work included the following:

- Cable-by-cable in-manhole field investigations of SFO-owned telephone and data infrastructure, AT&T-owned infrastructure, cable infrastructure, and systems installed for the benefit of other users. This was a very complex undertaking.
- Developed comprehensive butterfly as-built drawings of each manhole which included the following: subducts, splices, repeaters, cables to and from, cable tagging, available conduits, and an evaluation of vault conditions.
- Reconciled inconsistencies between utility drawings and as-built conditions.

ArcSine was selected for this work, in part due to ArcSine's industry-leading field capabilities. ArcSine's work in and around SFO had to meet exacting requirements in many areas including the following:

- Training/access to perform work activities on active airport runway/taxiway
- Gas monitoring/ventilation (% O₂, % CO, % LEL & ppm H₂S).
- Pump-out of manholes, including disposal of hazardous materials.
- Precise documentations, tracking, and reporting of personnel positions, traffic provisions, and response to emergency services and changing traffic conditions.
- Successfully working within complex organizations, hierarchies, with overlapping jurisdictions and diverse priorities.
- Foreign object debris training (FOD).
- Control tower coordination
- Security, police, and fire chief coordination

Electrical
Controls
Master Planning

