

Republic of Mali, Africa

Project Profile: International Photogrammetry

The Bamako-Senou Airport and Industrial Park Improvement Project is part of a \$460.8 million contract between the Republic of Mali and the Millennium Challenge Corporation to reduce poverty and increase economic growth. Sidwell's part in this project was to provide photogrammetric services to support the management of water and wastewater infrastructure.

Five distinct study sites were identified for services to include new color aerial photography, topography, mapping, and digital orthophotography. These sites located across the Niger River from the capital city of Bamako include:

- Bamako-Senou Airport, Mali's main airport (300 acres)
- Industrial Park Development Site (100 acres)
- Kabala Wastewater Treatment Facility (194 acres)
- Noumoubougou Landfill (85 acres)
- Project Planning Overview (37,000 acres)



The **first phase** of this project was to secure color aerial photography and a photo control survey that would support the subsequent photogrammetric services. Aerial photography at 1:4000 was required for four of the sites and at 1:20000 for the Project Overview. Flight plans were developed by Sidwell for each of the project sites, and locations for the GPS surveyed photo control data were selected. Each survey point also needed to be marked with a target so as to be identifiable in the resulting aerial photography. Survey plans were coordinated with a Malian survey company to set targets and obtain data for approximately 49 control points. Aerial photography was secured under the direction of Sidwell.

The **second phase** was the development of topographic mapping and digital orthophotography for each site. The natural and cultural features were collected as well as the terrain data. The terrain data was used to both create contours and generate an ortho-photographic base. 30 cm contours were developed from the 1:4000 imagery and 100 cm contours developed for the Project Planning Overview area. Color orthophotography was developed at 15 cm resolution for the four low flight project sites and 50 cm imagery was developed for the Project Planning Overview.



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