

DTW Runway 4R/22L Obstruction Evaluation

Romulus, Michigan

Spalding DeDecker Associates, Inc. performed an Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) for instrument procedure development to support the request to displace the runway threshold for 4R at the Detroit Metropolitan Wayne County Airport (DTW). Work was performed in compliance with FAA Advisory Circulars AC 150/5300-16A, 17B, and 18B, and submitted to the FAA via the Airport GIS (AGIS) website. SDA developed a statement of work (SOW), survey and quality control plan, coordinated



development of imagery plan, and completed final survey report. We coordinated work with sub-consultant Aerocon Photogrammetric Services, Inc. We also worked closely with Kimley-Horn, who performed the external QA/QC and provided assistance with planning, project scope development, and coordination with FAA and NGS personnel. SDA received photogrammetric mapping as shape files in ESRI format, and combined them with survey data using AutoCAD Civil 3D/Map. We delivered the final GIS drawing in compliance with FAA guidelines for data collection and airport GIS.



The majority of the mapping and obstructions located for this project were acquired by photogrammetric mapping methods. The FAA advisory circulars have extremely rigorous procedures for confirming existing control, setting aerial targets, measuring safety critical data including runway ends and profiles, and locating navigational aids. All photo control points were pre-targeted, either by painting a target, or using

pavement marking tape. Forms required include a GPS obstruction sketch, point sketch, and GPS occupation form for all measurements. Type 1, 2, and 3 photographs were taken according to NGS procedures for obtaining the photos, completing the captions, and naming the files. The Existing Primary Airport Control point (PAC) and Secondary Airport Control points (SACS) were confirmed with OPUS solutions. Bases were set on these points for radial RTK measurements to adjacent NGS benchmarks, NAVAIDS, runway ends and profile, and photo-control points.

OWNER / CLIENT

Wayne County Airport Authority

PROJECT START - END

November 2007 - Ongoing

SDA PROJECT NO.

SM08-005, Task 36

SDA SERVICES

Photogrammetric Control Surveys



We provided deliverables for the photo-control in accordance with advisory circular AC-150/5300-17B and for the final report in accordance with 150/5300-18B. This included comparison reports, FAA forms, sketches, photographs, point lists, narrative reports, and other information required in an exact file structure, as defined in the standards. The report and final CAD file were submitted through the Airport GIS website.