



**Owner**

Chicago Department of  
Aviation

**Client**

O'Hare Modernization Program

**Project-Specific Joint Venture**

MWH/DELTA JV

**Schedule**

Aug. 2004-Dec. 2009

**Total Project Costs**

\$ 39.795 Million

***Honor Award – Water  
Resources Category,  
2010 ACEC-Illinois  
Engineering Excellence  
Awards***



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**O'Hare Modernization Program  
South Basin Pump Station (16.1 MGD)**

MWH-DELTA provided mechanical, plumbing, electrical, and instrumentation design including civil, architectural, and structural engineering services for this project. This involved preparing complete contract documents including plans, specifications, design calculations, quantities and cost estimates. Complete electrical power and lighting, conduits and wiring schedules, lighting fixtures and panel schedules with applicable details were designed and shown on contract documents. The design of the underground South Detention Basin Pumping Station had an inside diameter of 56 feet and a depth of 79 feet. The pump station was designed with baffle walls and included a valve vault accessible from the top including an electrical room.

The complete system is comprised of three 450-HP, 460V three-phase storm-water pumping sets and three 100-HP, 460V three-phase ground water pumping sets all on variable drives. Power distribution is via 3000A, 460V, three-phase switchgear and a Motor Control Center. Controls are with PLC and MWRDGC Telemetry Signals. The total pumping capacity is 2 x 12.5 CFS \_ 1 x 12.4 spare (11,221 gpm). A 24-inch diameter ductile iron pipe was designed for force main to discharge into existing force main. MWH-DELTA designed four oil-water separators with 50,000-gallon capacity tanks each and provided power cables and communication cables in duct-banks for monitoring the control and alarm functions of each oil-water separator.

