

## CASE STUDY

# Daytona International Airport Uses Double Run of HP Storm Daytona Beach, FL

### OWNER

County of Volusia, FL

### ENGINEER

AVCON, Orlando, FL

### CONTRACTOR

GPS Civil, Holly Hill, FL

### INSTALLATION DATE

May 2025

### PRODUCTS

560' (170 m) of 24" (600 mm) HP Storm

240' (73 m) of 30" (750 mm) HP Storm

80' (24 m) of 36" (900 mm) HP Storm

80' (24 m) of 48" (1200 mm) HP Storm

2,840' (866 m) of 60" (1500 mm) HP Storm

### DESCRIPTION

While completing a large runway reconstruction project, Volusia County, the owner of Daytona Beach International Airport, recognized it also needed to replace a deteriorating CMP culvert in the safe area of runway 25R, the airport's main runway. The original design called for the installation of a large box culvert, which was a costly item and contributed to the project estimate coming in over budget. Volusia County connected Advanced Drainage Systems with the design engineer to come up with a solution to keep the project within budget.

ADS, which has done numerous airport projects, went to work on designing the project in a cost-effective manner. ADS' design was a double barrel run of 60" (1500 mm) HP Storm pipe to convey stormwater under the runway's safe area. Using HP Storm rather than a concrete box culvert allowed the airport to stay closer to the budgeted numbers and provided a long-term solution.



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Smaller diameters of HP Storm, from 24"-36" (600-900 mm), were also used to convey stormwater to the double barrel run. An 80' (24 m) run of 48" (1200 mm) HP Storm was utilized to fill an open water ditch. Closing the ditch moved all the stormwater underground to avoid open water and to keep birds away from the runway to help prevent bird strikes.

HP Storm not only saved money on the project, but provided numerous benefits. The installation needed quick completion as Runway 25R could not be shut down for a long amount of time. The runway is needed since larger planes can't land on the airport's other shorter runway. In addition, the HP Storm pipe could be stored on site with the smaller diameters being nested inside the larger diameter pipe, which also decreased the number of delivery trucks going into the secured area.

HP Storm polypropylene pipe provides superior pipe stiffness, longer bells and spigots and a premium joint performance for a longer service life. The smooth interior wall offers additional strength and high flow capacity. HP Storm pipe, available in diameters from 12"-60" (300-1500 mm) meets or exceeds the standards specified in ASTM F2881 and AASHTO M330 and the extended bell and spigot meets ASTM D3212. Polypropylene is resistant to the effects of chemicals, abrasion, hot soils and effluent.



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