

Liver than Live Rehab

Sliplining HOBAS® Pipes Under Airport Runway, US

McAllen-Miller International Airport (MFE) is the primary business airport of deep South Texas and Northeast Mexico. To accommodate the region's future needs, a number of future projects were developed. A recently completed project included improvements to a raw water supply channel that traverses areas of Hidalgo County and parts of the airport. When the main supply line at the airport was rehabilitated using HOBAS GRP Pipe, it brought new meaning to the term "live sliplining".

Custom Solution

The project was developed after aerial photography identified strips of lush vegetation along the pipe alignment, a clear indication of leakage. The original water line consisted of 1.2-m-long segments of 1800 mm diameter concrete pipe. Over the years, the pipeline was extended to accommodate runway-widening projects. Newer 2.4-m sections of concrete pipe were installed on either end of the existing line.

In rehabilitating the waterway installation, contractor Summit Contracting had to deal with these extensions as well as other irregularities of the pipeline. The existing line had numerous repaired areas where the inside diameter was no longer full size. To compound the problems, several of the pipe joints had settled and moved over the years causing offsets, angular bends and further leaks.

Summit evaluated the line and devised a plan to install the new pipe. Consulting engineer HNTB specified a 1600 mm diameter CC-GRP pipe, since it met both the hydraulic considerations and the clearance required by the installer. The largest angular bend in the line was at about the midpoint under the active runway 13/31 and could not be navigated with pipe sections. Closing the runway was, however, not an option.

"We fabricated a buggy that we utilized to carry the pipes into the existing line," stated Ben Salinas, vice president of Summit Contracting. "The first segment placed at the line midpoint was a mitered fitting with an angle that corresponded exactly to the angle measured." Subsequent pipes and mitered fittings were carried in from either end of the line until the entire 332 meters of line was rehabilitated. The so-called live sliplining took on a new meaning because air traffic on the surface continued with no major inconveniences while the old pipeline remained in service.

Ahead of Schedule

"The project was a huge success and the McAllen-Miller Airport received the repaired line a week ahead of schedule. We are confident that the success of the project keyed upon using HOBAS Products. We were very satisfied with the product and the HOBAS Support Team," added Hugh Weaver, associate vice president for HNTB.



Year of construction
2004
Total length of pipe
332 m
Pressure class
PN 1
Diameter
DN 1600
Stiffness class
SN 10000
Installation method
Relining

Application
Raw water supply line
Client
City of McAllen
Contractor
Summit Contracting
Advantages
Leak-free pipeline, existing pipeline and runway remained in service during the installation process

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