

Inline Check Valve Prevents Storm Water Backflow

During typical rain events, a creek drain in Ann Arbor, Mich., would rise significantly and backflow into a connecting storm sewer, causing flooding on adjacent heavily traveled streets and properties. The city installed a duckbill check valve to help prevent the backflow. However, the valve protruded from a retaining wall and was damaged by violent surging that occurred at the mouth of the drain during storms.

The city needed an inline check valve that would be out of the flow path, prevent backflow and open with positive gravity flow to drain the storm line. An all-rubber construction was ideal, as it would allow for minimal user maintenance and durability in submerged or weather-exposed conditions. It also would need the ability to open with little head pressure.

The Tideflex CheckMate inline check valve provided the city with the solution it needed. The valve has an all-rubber design that opens with as little as 1 in. of head pressure. Designed to close silently, the valve seals tightly in up to 40 ft of back-pressure with no leakage. The valve also slips entirely inside the pipe and is pressed securely into the pipe's inner diameter using a stainless steel expansion clamp. Installation is simple and fast, and there are no mechanical parts to maintain. The valve has been hydraulically tested to ensure reliable performance.

Using the CheckMate, the city of Ann Arbor was able to prevent storm water backflow from the creek drain onto streets and surrounding properties. The inline design removed the valve from the surge path, protecting it and making it almost unnoticeable to the public. The valve is expected to provide Ann Arbor with years of dependable backflow prevention.



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