



INTERNAL PIPE

HydraTite®

JOINT SEAL

Market
DOT

Challenge

Five culverts had become less effective at managing the flow of water due to joints becoming separated and offset. Some joints had become offset by 2 inches. The result was groundwater infiltrating the pipe and carrying in the surrounding soil. This would lead to a sinkhole that would disturb the traveling public above by damaging the roads. Replacement would be an inconvenience for drivers as well and so an internal solution was needed.

Engineered Solution

HydraTite Internal Pipe Joint Seals were selected for this rehabilitation project. Many defective joints would have standard-wide seals installed over them, but the joints with more severely separated and/or offset joints would receive extra-wide and double-wide as needed.



Scope

65 seals were installed across the 5 locations. The seals with the largest diameter were 60", the next size down was 54", and the smallest was a custom-manufactured 39.5". The culverts were not entirely dewatered and in the pipe with the heaviest flow, the crew installed the seals in water up to their knees. 3 of the 5 pipes also had mud which had to be cleared away from the joints prior to installation. Due to HydraTite being a trenchless internal solution, no traffic control was needed. The entire process only took a small crew 2 weeks to finish.

Solution

The proper flow was reestablished in these 5 culverts. HydraTite revitalized these pipes at a fraction of the cost and time associated with replacement and disturbed drivers less while being installed. HydraTite will provide these joints with protection from infiltration longer than grout and other temporary measures.



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