



## CASE STUDY SHEET

# JAN 2024

# UPDATE

### Cretex PRO-RING™ Manhole Grade Adjustment Ring System

**Project:** PRO-RING™ Installation Demonstration and Endurance Test

**Installation Date:** April 6, 2010

**Location:** MH# H190029 on Putnam Pike (State Rt. 44) in Johnston, RI  
State Rt. 44 carries an average of 18,000 to 20,000 vehicles per day per RI DOT data

**Inspection Date:** The most recent inspection was conducted on **December 6, 2023** after more than **13 years** of continuous service. It is estimated that this manhole has been impacted more than **350 million** times based on the location (driver's side wheel path) and the volume of auto and multiple axle vehicular traffic on this road.

**Owner:** Narragansett Bay Commission  
Providence, RI

**Scope:** Reconstruct a deteriorated brick adjustment area of a sanitary sewer manhole located in a busy state highway. This deterioration was allowing the manhole to take on water during rain events which was washing in sub-grade material and causing the pavement surrounding the manhole to settle and crack.

The failing pavement was saw cut and removed to expose the manhole frame and failing brick work. The frame and cover were removed and several courses of the deteriorated brick was also removed to get down to structurally sound material.







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The first PRO-RING™ used was a 6" Grade Ring to take up the major adjustment and was set into a bed of non-shrink grout to compensate for the irregularity of the brick. A 1" Finish Ring was installed next using M-1 Adhesive in the tongue and groove joint. A bead of the M-1 was then placed on the flat top surface of the Finish Ring and the manhole frame was set in place. The excavation was backfilled, compacted and the asphalt was replaced. The surface restoration was completed using a portable vibrator and traffic was immediately allowed to move over the manhole.



April 2010



April 2011



Dec 2023



Dec 2023



Dec 2023

**Inspection Results:** On 12/06/2023, visual inspection of this iconic Cretex PRO-RING™ installation exhibited no evidence of structural issues, deterioration or any inflow/infiltration. The surrounding pavement repair also remains in reasonably good condition with no visible cracks, or signs of fatigue or failure.

