



## *Bristol Pipe Inspection with Pipe Crawler*

# Damaged and Inaccessible Pipes are No Match for Robotic Pipe Crawler

### **PROBLEM**

In Bristol, VA, personnel could not fully visually examine aging pipe infrastructure and pipe failure due to a variety of issues including partially clogged and separated conditions, size, or length.

### **SOLUTION**

VDOT contracted with PILLAR to examine the interior of partially blocked, separated, cracked, and under-functioning pipes using a video inspection robot, or pipe crawler. PILLAR used the data gathered by the pipe crawler to plan repair and/or replacement strategies. To date, PILLAR has crawled through 1,000 feet of pipe.

### **APPROACH**

The experts at PILLAR combined human assessment in the field with robotic data gathering to perform a complete assessment of pipes within the service area. Teams visually inspected pipes to gather information regarding the diameter, type, length, end protection type, and approximate cover of pipes. They also assessed, photographed, and recorded the condition of the pipes, end protection, and outfall and promptly reported any safety hazards to VDOT.

The team examined pipe interiors using the Deep Trekker DT340X Pipe Crawler as it can both crawl through pipes and over any obstacles that caused obstruction. Each interior inspection was thoroughly documented with photo and video; the videos were date and time stamped and also indicated the distance in feet from the entrance of the pipes. Images and videos were delivered to VDOT along with detailed reports.

